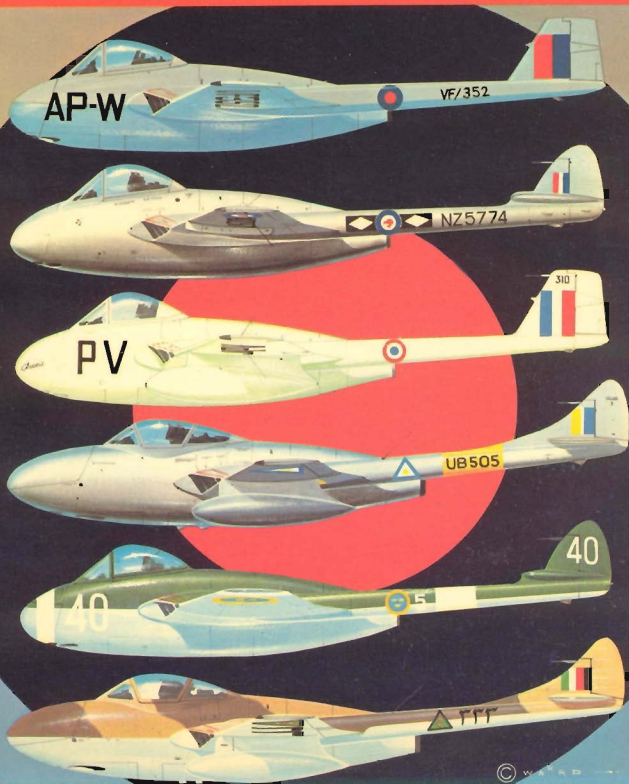


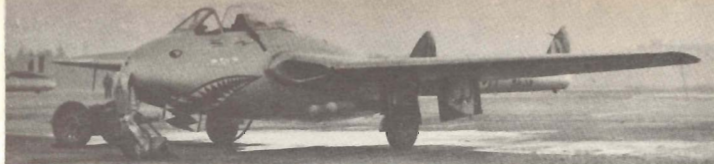
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№33

DE HAVILLAND VAMPIRE F1-T55

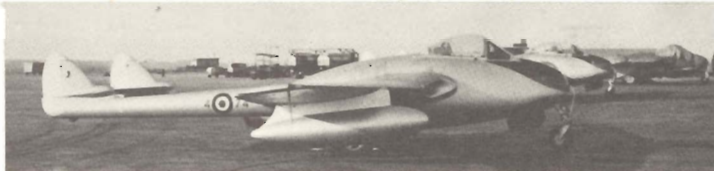
IN RAF-FAA-RAAF-RNZAF-SAAF-RCAF & FOREIGN SERVICE





Above: Sharkmouthed FB.5 of No. 112 Squadron, 2nd TAF, RAF. (via Robin Brown)

Below: FB.52 of the 4th Aerobrigata "Cavallino Rampante", Italian Air Force. (via R. C. B. Ashworth)



Left: T.35 of the "Telstars" Aerobatic Team, Royal Australian Air Force. (d'E. C. Darby)

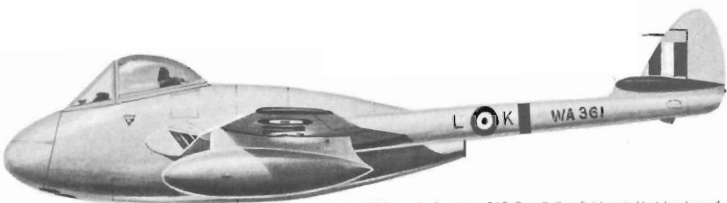
Below: Sea Vampire T.22, Lossiemouth Station Flight, FAA, Abbotsinch 1962. (via R. Levy)



Above: Vampire FB.5 of the Mechanics School, Rochefort 1962. French Air Force, VZ166.

Below: Mistral bombed up and awaiting take-off during the Algerian War, 1957. French Air Force, (Photos ECA via J. Cuny)





Vampire FB.5, No. 16 Squadron, RAF. Overall silver finish, note black band round boom, acorns and wing-tips.

DE HAVILLAND VAMPIRE F1-T55

IN RAF-FAA-RAAF-RNZAF-SAAF-RCAF & FOREIGN SERVICE

Illustrated by Richard Ward

Compiled by
Richard Ward & Roger Levy

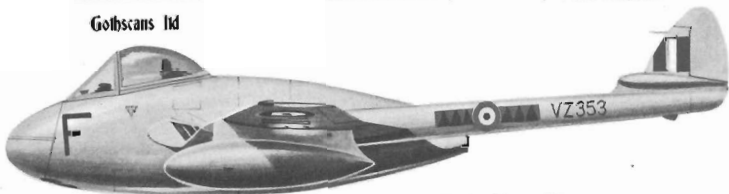
Text by Roger Levy

Goltsmans Ltd

ACKNOWLEDGEMENTS

For nearly thirty years in thirty-three Air Forces and Navies the De Havilland Vampire has enjoyed a longevity equalled probably by only one other jet, the P-80/T-33 series. First service jet with a top speed of over 500 miles per hour, first to take-off and land on an aircraft carrier, first British jet to make a formation crossing of the Atlantic. In many countries abroad the Vampire will be remembered as the nation's first jet fighter, and a few are still in service as trainers today. Many thanks to all those who assisted with photographs and information whose names are listed below in alphabetical order.

R. C. B. Ashworth, Robin Brown, J. Cuny, d'E. C. Darby, De Havilland, ECA, Finnish Air Force, Flight International, J. M. Gradidge, J. G. Johnson, A. P. de Jong, N. Kiska, R. Levy, Maj. Finn Lillevik, D. A. Noble, S. P. Peltz, Raymond Rayner, Eino Ritaranta, E. Taylor, J. W. R. Taylor, Jose Villela, Jr.

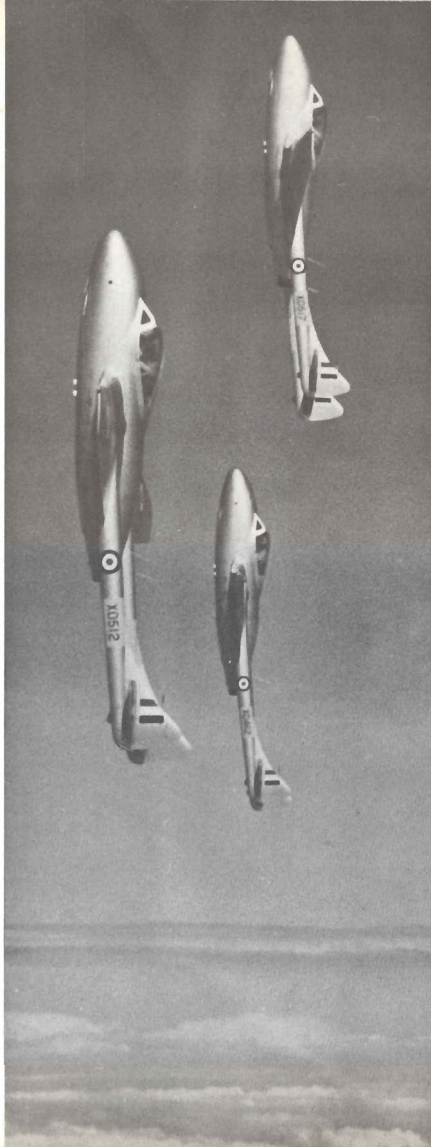


Vampire FB.5, No. 614 Squadron, "County of Glamorgan", Royal Aux. Air Force. In overall silver finish with red and green squadron markings and black lettering.

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- Jordanian Air Force
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- Lebanese Air Force
- Iraqi Air Force
- Egyptian Air Force

A neat vic of T.11's of the RAF standing on their tails high above the overcast. Silver with yellow T bands.



An FB.5 of No. 112 Squadron, 2nd TAF, RAF, Germany, firing practice rockets.

DE HAVILLAND VAMPIRE F.1-T.55

The Vampire, inevitably linked with the Meteor, will be chiefly remembered in Britain as one of the main stepping stones between the piston engine fighters of World War 2, and the long-awaited swept wing, transonic jets of the mid-1950's. For a decade the RAF depended upon the inseparable Vampire and Meteor, and though they were decidedly elderly by the time replacements finally materialised, they served us well. The Vampire was soon switched from interception duties to become our first ground attack jet, our first Navy jet, and then to give outstanding service as a standard jet trainer.

In many countries abroad the Vampire will be remembered as the nation's first jet fighter, and indeed a few still serve as trainers today... more than thirty years since the beginning of the Vampire story.

Single seat fighters

The Vampire originated from the Air Ministry specification E.6/41 for which de Havilland's D.H.100 design proposal was accepted for a single seat, high performance, turbo-jet powered, experimental aircraft. Detail design work began in 1942 and although not specified, de Havilland made provision for a fixed armament of four 20mm cannon in the nose. The D.H.100 was a highly unconventional design with a very compact nacelle housing the jet engine, pilot, armament, nose wheel undercarriage, and two slim fuselage booms supporting the tailplane high above the jet efflux. The purpose of this unusual layout was to avoid friction losses with the jet engine and maintain maximum efficiency of the relatively low-power unit by reducing the length of both the air intakes and the jet pipe. Air intakes for the 2,700lb. static thrust Halford H.I engine were situated in the wing roots, the engine itself being immediately behind the cockpit. The airframe was of composite construction, mostly of metal, but with the forward fuselage made from balsa and aircraft grade plywood, bonded with synthetic resin glues following the practice employed with the earlier Mosquito.

The engine, designed by Major F. B. Halford, was of the centrifugal type, and was manufactured by de Havilland as the Goblin 1.

The first prototype D.H.100, known as the "Spider Crab" and bearing the serial LZ 548/G made its maiden flight from Hatfield in the hands of Geoffrey de Havilland Jr. on 26 September 1943. Initial flight testing

proved the docility of the aircraft despite the unconventional configuration and then-revolutionary type of propulsion. The only significant change to the airframe was the reduction in height of the pointed fins and rudders, which were squared off on the second and third prototypes, LZ 551/G, and MP 838/G which joined the test programme early in 1944 and featured four 20mm Hispano cannon in a ventral pack beneath the forward part of the main fuselage nacelle.

The good performance and handling characteristics shown by the D.H.100 were rewarded by an Air Ministry production contract placed on 13 May 1944 for a total of 120 aircraft, to be manufactured by the English Electric Co. Ltd. at Preston, Lancs (as de Havilland's own production facilities were already at full stretch with the large-scale manufacture of the Mosquito). The name D.H.100 was also changed officially to the Vampire F.1. The first production aircraft, TG 274/G flew from Salmsbury on 20 April 1945, and on the following 7 May an additional order for Vampire F.1s was placed. The first 40 Vampire 1s retained the Goblin 1, thereafter subsequent machines were fitted with the Goblin 2 of 3,100lb. s.t. which gave a top speed of about 530 m.p.h. at 18,000 feet—significantly greater than the larger, twin-engined, contemporary, the Gloster Meteor, and making the Vampire F.1 the fastest fighter of the day, although it was not available in large enough numbers to see service before the cessation of World War 2. The 51st (TG 336) and subsequent F.1s were fitted with a pressure cabin, and an increased internal fuel capacity thereby partially helping to remedy the low endurance which was one of the main shortcomings of the early Vampires. Provision was also made on later Mark 1s to accommodate a Mosquito-type slipper auxiliary drop tank beneath each wing of either 100 or 200 gallons capacity, although these were cumbersome and seldom ever fitted. From the 87th aircraft (TG 386) onwards a single-piece bubble canopy was introduced instead of the three-piece framed type. The bubble canopy remained standard for all subsequent Vampire and Venom single seaters, and was retro-fitted to many of the early Mark 1s.

Many of these early aircraft were used on research and development work to test various design and equipment improvements such as those just described, while others were employed as engine test beds in the continual quest for more power and greater efficiency.

TG 287 was used by English Electric for aerodynamic

tests; TG 372 underwent winterisation trials at Edmonton, Alberta, and at Watson Lake, Yukon, in Canada; TG 275 was used in drop tank trials, which eventually resulted in a standard type of 100-gallon pylon-mounted underwing tank; several Vampire 1s were used in the development of the Sea Vampire, and others in Goblin engine development. One of these was TG 433 which was fitted with a Goblin 3 of 3,300lb. thrust, and which formed the basis of the Swiss Vampire F.6.

TG 276, 280 and TX 807 were modified to take a 4,500lb. thrust Rolls-Royce Nene 1 instead of the Goblin, and in this form were designated Vampire 2s. Additional dorsal air intakes were fitted behind the canopy to feed the side of the Nene's double-sided compressor, and these, nicknamed "elephant ears", characterised the early Nene-powered Vampires. Manufacture of an improved Nene-Vampire for the RAF, under the designation Mark 4, never came to fruition but similar variants were produced under licence in France and Australia to which country TG 807 was exported, and re-serialised A78-2, where it served as a development machine for the F.30.

Another engine test bed was TG 278, which was fitted with the de Havilland Ghost 2 engine of 4,400lb. thrust, and was further modified by a special pressure canopy with a metal hood and "porthole" window, and had a four-foot pointed extension to each wing tip. On 23 March 1948, this aircraft, flown by John "Cats Eyes" Cunningham attained a world high altitude record of 59,446 feet. With aerodynamic and structural refinements the Ghost Vampire was tentatively planned for production as the Vampire 8, but this type was later refined as the D.H.112 Venom.

Three more Vampire 1 fuselages deserve mention, TG 283/G, TG 306/G and VW 120, which were modified to become the fuselages of the swept-wing, tailless, ill-fated D.H.108 research prototypes, powered by higher thrust Gobblins. VW 120 had a more streamlined nose than its predecessors, a feature tested on Vampire 1 TG 281.

No 247 Squadron at Odiham, Hants., became the first operational RAF squadron to receive the Vampire F.1 when it re-equipped from Tempest 2s in April 1946. 247 was used to gather service information on the operation of the type and flew intensively throughout the summer of 1946. No jet conversion trainer existed and pilots were expected to make the transition from piston fighter after a relatively rudimentary briefing on the handling techniques and a familiarisation of the cockpit. The Vampire was pleasant to fly, however, and considered less demanding than most of the current prop-driven fighters, although the nose-wheel undercarriage and higher approach speeds required particular attention during the landing.

No. 247 Squadron made its public debut with Vampires when it contributed a contingent of these aircraft to the massed victory flypast over London on 8 June, between its operational work-up activities at Odiham. Here two further squadrons, Nos. 54 and 130, converted to Vampires in the autumn and by the beginning of 1947 all three formed the first operational Vampire wing, although 130 Squadron was re-numbered 72 on 31 January. These three Odiham units were destined to remain the only regular front line Vampire squadrons in Fighter Command, as the majority of UK-based fighter squadrons standardised on various marks of Meteor. Although replaced in the Odiham wing in 1948, the Vampire 1 went on to become the first jet to serve with the RAF in Germany when No. 3 Squadron at Wunstorf received the type in April 1948 where it served until the following May. With the release of aircraft from the regular squadrons it was possible to equip some of the Royal Auxiliary

Air Force units, the first of which was 605 (County of Warwick) Squadron, normally based at Honiley, but which began conversion to Vampire F.1s on 3 July 1948 while detached to Tangmere for its annual summer camp. Nos. 501 and 502 Squadrons of the R. Aux. AF also received Vampire 1s and remained in service until the end of 1951 when they were phased out of service and, with the exception of a very few aircraft used for training purposes, passed on to the Maintenance Units (M.U.s) where many lingered until the mid fifties before being scrapped.

This fate was not shared by all Vampire 1s, however, because a number were exported—one to Canada, four to Switzerland, and 70 to Sweden where the type received the designation J.28. After serving in the fighter and training roles for several years a few of the Swedish Vampire 1s were re-exported to Austria, and 25 to the Dominican Republic in 1955.

The Vampire F.1 was succeeded in production by the F.3, designed to specification F.3/47, which called for increased range. This was achieved by increasing internal fuel capacity from 202 to 326 gallons and by the provision of two pylon-mounted underwing drop tanks, normally each of 100 gallons, but larger tanks of twice this capacity could be carried for ferrying. These modifications increased loaded weight by 1,500lb. to 11,970lb. in total, but had the effect of almost doubling the range—from 730 miles to 1,390 miles, at 30,000 feet. To counteract longitudinal instability when drop tanks were fitted, the fins and tailplane were re-designed, the fins reverted to the characteristic "de Havilland" shape, with reduced elevator chord, while the tailplane chord was increased, and the unit lowered by 13 inches to intersect the booms and fin in a streamlined buller or "acorn" fairing. Vampire 1 TG 275 was used to test these features, and served as the prototype F.3, making its first flight as such on 4 November 1946. More than 170 Vampire 3s were built by English Electric at Preston, beginning with VF 315, although a few were converted to Sea Vampires and others diverted for export. A few were also used for development, notably VV 190, powered by a Goblin 4 of 3,500lb. s.t.

Late in 1947 the Odiham wing (54, 72, 247 Squadrons) began to phase out Vampire 1s in favour of F.3s, although it was not until the following year that they were fully equipped. To emphasise the longer-range capabilities of their new aircraft, six Mark 3s of 54 Squadron, led by the C.O., Sqdn. Ldr. R. W. Oxspring, DFC, made history in July 1948 by being the first jet fighters to fly the Atlantic when they staged through Iceland, Greenland and Labrador to visit Canada and the US where they showed the flag at several air displays. Vampire 3s saw only a short period of service with regular fighter squadrons in Britain and were phased out of service at Odiham late in 1949 in favour of F.B.5s. Vampire 3s continued to serve in the UK with the Royal Auxiliary Air Force until 1952, however, and were flown by Nos. 601 (County of London), and 604 (County of Middlesex) Squadrons at North Weald, No. 608 (North Riding) at Thornaby, and No. 614 (County of Glamorgan) at Llandow. During the last months of their service the Vampire 3s began to exhibit the colourful unit markings which were to become so much a feature of the "weekend" squadrons.

Vampire 3s were also used by the RAF overseas, and in the autumn of 1948 they entered service with 73 Squadron based at Ta Kali, Malta, which retained them for almost four years, in the course of which detachments were made to Libya, Cyprus, and the Canal Zone. In May 1949 No. 32 Squadron at Nicosia, Cyprus, received F.3s and during the 18 months these aircraft were on unit



F.1 of No. 605 Squadron, Royal Auxiliary Air Force taxiing out for take-off at Honiley during 1948. Grey upper surfaces, azure blue under surfaces with natural metal tanks and pylons, code and nose panel white, serial TG/342 in black. No. 605 was the first Auxiliary Squadron to fly the Vampire F.1.

strength undertook tropical trials work which helped in the development of later variants.

The Vampire 3 had a much lengthier career with foreign countries. The main user was Canada, which ordered 83 (RCAF serials 17002-17086). After serving with regular and auxiliary fighter squadrons the Vampire 3 was phased out of the RCAF in 1958. Many of the aircraft were stored for a while, some were civilised and sold for conversion to single-seat executive jets, one or two examples of which have survived in the US until very recently. Fifteen other ex-RCAF Vampire 3s were re-conditioned and sold to the Mexican Air Force in 1961 where they served with 200 Squadron. Australia received 41 Vampire 3s, which had serials in the A.78—range, and were used as advanced trainers pending availability of the Nene Vampires. Four Mark 3s were sold to the Royal Norwegian Air Force, and at least three went to India.

By 1948 the RAF had already decided that the Gloster Meteor should be its standard interceptor until the advent of more radical, "second generation" jet fighters. The Meteor was considered to have a better development potential than the Vampire mainly because of its twin-engine layout which also offered a higher safety factor. The Vampire was nevertheless a proven design, easy to fly, inherently stable, and simple and economic to operate, and so the emphasis swung away from its continued development as an interceptor, to the more suitable but equally important rôle of fighter-bomber. This shift of policy was anticipated by de Havillands who were already planning to further utilise the load-carrying capabilities of the Vampire, and so the Vampire 5 was born.

Destined to become the most prolific variant, the Vampire 5 made use of strengthened wings to take greater loads, which had provision for extra strong points to accommodate a maximum ordnance of 2,000lb. The wings were also given thicker skinning and clipped by the removal of a foot from each tip. A strengthened undercarriage was also incorporated to cope with the faster sink speeds which resulted from the higher wing loading and increased all up weight of 12,360lb. The engine remained the Goblin 2 which gave the Vampire 5 a maximum speed of 535m.p.h. at low altitude, where its handling made it a steady weapons platform well suited for ground attack.

A Vampire 1, TG 444, served as an aerodynamic and structural test aircraft for the Mark 5, full production machines of this type, designated F.B.5s began to leave the English Electric factory in June 1948, commencing with VV 214. Altogether English Electric went on to produce 850 of the total of 1,150 Vampire 5s, the remaining British-built aircraft being manufactured by de Havillands at Hatfield and Broughton (Chester).

The Vampire 5 was destined to have a long and eventful career with the air forces of many nations, none of which was more outstanding than its service with the RAF which began late in 1948 and spanned more than a decade. The F.B.5 supplanted F.3s with 54/72/247 Squadrons at Odiham the following year, when all three units were very much in evidence giving formation aerobatic displays at several air shows, and also putting up a combined formation of 18 aircraft for the Battle of Britain flypast over London on 15 September. Later the same month Odiham was the scene for large scale Vampire 5 operations during the major annual air defence exercise, "Bulldog". The home-based squadrons were supplemented by two French Vampire 5-equipped units from Dijon, and by 605 Squadron's Vampire 1s. The following year 72 Squadron moved to North Weald, while 54 provided the main RAF aerobatic team with five aircraft, which took part in the Hendon display and 1950 Farnborough display when they made spectacular use of red, white and blue smoke. In 1952 all three squadrons were re-equipped with Meteor 8s, and the F.B.5 passed from first line duties with Fighter Command.

The cold war, and especially the 1948 Berlin crisis, had served to highlight the need to keep large Allied armies based on the Continent to stave off the possible onslaught by numerically greater Communist forces, and hence the RAF's 2nd Tactical Air Force was planned to be considerably expanded. The outbreak of the Korean

War in 1950 gave fresh impetus to the expansion and re-equipment programme which centred on the Vampire F.B.5. Some squadrons re-equipped from Mosquito fighter or light bombers, while new squadrons were formed, and in all a total of 19 squadrons flew F.B.5s, comprising Nos. 3, 4, 5, 71, 14, 16, 20, 26, 67, 71, 93, 94, 98, 112, 118, 130, 145, 234 and 266. German-based Vampires were initially finished in the overall silver scheme used by home-based day fighters, but in 1951 a new 2nd TAF camouflage scheme was introduced, comprising dark sea green and dark sea grey upper surfaces, and cerulean blue under surfaces. Two-letter squadron code letters were replaced by a single letter (usually black) and an individual letter on each side of the fuselage roundel. Great emphasis was placed on tactical support of British and Allied army units in the field and upon rapid mobility, which involved frequent detachments and re-deployment exercises to other airfields, where the Vampires were usually dispersed under camouflage netting. Later in 1952 the Vampire wing at Wunstorf (5, 11 and 266 Squadrons) began to re-equip with Venom F.B.1s, and the next year the Fassberg wing (14, 98 and 118 Squadrons) followed suit, while other squadrons were re-grouped into new wings which began to receive the Sabre. The Vampire F.B.5 was not finally phased out of service in Germany until the middle of 1954, by which time the last major wing at Celle (16, 94 and 145 Squadrons) had re-equipped with Venoms.

The F.B.5 also saw considerable RAF service in the Middle East, where a total of six squadrons were equipped, and with two squadrons of the Far East Air Force. In the Middle East No. 6 Squadron was the first to fly the Mark 5, when it received its initial delivery on 17 October 1949, at its base of Deversoir, Egypt. During the next two years the squadron was seldom at home, with frequent goodwill visits throughout the Middle East to Iran, Jordan and to Cyprus for armament practice camp. In June 1951 it was hastily despatched to Shaibah in the Persian Gulf following the nationalisation of the Anglo-Iranian Oil Co. and the subsequent dispute. Subsequently the squadron went to Habbaniya in November and the following year re-equipped with Mark 9s. The frequent moves around the Middle East and Mediterranean were fairly representative of the other Vampire 5 squadrons in the area which comprised No. 32 which re-equipped at Nicosia in January 1951, Nos. 73 and 185 at Ta Kali, Malta in 1951, No. 213 at Deversoir in December 1949, and No. 249 at the same base the following year.

In the Far East No. 60 Squadron at Tengah, Singapore, became the first F.B.5 user in December 1950, and early the following year were already flying operational strikes against the Communist guerrillas during the Malayan emergency—a pattern which was to continue until the type was supplanted. No. 28 Squadron based at Kai Tak, Hong Kong re-equipped with F.B.5s in January 1951, and operated a detachment from the airfield of Se Kong on the Chinese mainland, very close to the Communist border, and with one of the most difficult runway approaches in the world, hemmed in by steep mountain slopes.

The widespread operation of the Vampire 5 in hotter climates highlighted the need to provide the pilot with cockpit refrigeration; this need can hardly be better illustrated than recording the fact that while 6 Squadron's Vampire 5s were detached to Shaibah cockpit temperatures of 165°F were recorded! In such high ambient temperatures the performance of the Goblin was much reduced, and so a tropicalised version of the Vampire 5 was produced as the F.B.9, which featured the Goblin 3 of 3,350lb. thrust and the fitment of a Godfrey cockpit refrigeration unit near the starboard wing root which necessitated the intake fillet being extended 8" forward on that side. It is a little known fact that a considerable number of F.B.5s were later modified to incorporate this cooling equipment (although it was not always fitted) and these aircraft also featured the extended starboard intake fillet; the only sure way of identifying the F.B.5 from the F.B.9 was therefore by serial number.

F.B.9 production commenced with WG 848 in 1951 and continued through WL, WR and WX serial ranges

until the last example, WX 260, was completed in December 1953—the final single-seat Vampire for the RAF. More than 350 F.B.9s were produced, mainly by de Havillands but including 51 sub-contracted to Fairley at Stockport, whose aircraft were test flown from Ringway, Manchester.

Vampire F.B.9s entered service with 60 and 28 Squadrons in the Far East in 1952, and later with 45 Squadron which also took part in the Malaysian emergency (Operation Firedog) with these aircraft flying from Butterworth in 1955. By the following year all three squadrons had re-equipped with Venoms.

In the Middle East the F.B.9 supplanted the F.B.5 with Nos. 6, 32, 73, 185, 213 and 249 squadrons, and re-equipped No. 8 which converted from Brigands at Khormaksar, Aden, in December 1952. This squadron was later deployed to Kenya to take part in the air strikes against the Mau Mau terrorists. By the end of 1955 the last remaining Vampire 9s were phased out of service with the Middle East Air Force and were mostly flown back to Britain where some were refurbished and issued to R. Aux. AF and training units, while others, with worn and weary airframes, were temporarily stored and then scrapped in 1956/57 mainly at 12 M.U. Kilbride and 22 M.U. Silloth, which soon became Vampire graveyards.

The Vampire F.B.5 saw extensive service with the Royal Auxiliary Air Force and equipped ten of the force's twenty squadrons between 1950 and March 1957 when the "weekend warriors" were disbanded. Throughout that period the Auxiliary squadrons played a vital rôle in keeping former regular air and ground crews in current flying practice and thereby providing a second force fully trained to operational status. Under the shadow of the Korean conflict in the early '50s the R. Aux. AF squadrons were called up for longer periods of intensive training and weapons practice than the customary two week's annual camp—which was often held at an RAF base overseas such as Malta, Gibraltar or Germany. In addition there were frequent exercises with regular Fighter Command units, usually involving detachments to other bases. Squadron strength was officially 12 Vampire 5s and two Meteor T.7s for continuation training, instrument ratings, and target towing; however, from about 1955 onwards a few Vampire 9s were also used by most of the Auxiliary Vampire squadrons, which comprised Nos. 501 (Filton), 502 (Aldergrove), 602 (Abbotsinch), 603 (Turnhouse), 605 (Honiley), 607 (Ouston), 608 (Thornaby), 612 (Dyce), 613 (Ringway) and 614 (Llandow). While the Auxiliaries' aircraft may have become obsolescent towards the end of their existence, there is no doubt that whatever was lacking with their equipment was more than offset by their keenness and *esprit de corps*.

Vampire 5s, later supplemented by Mark 9s, also did sterling service as advanced trainers in which rôle their docility combined with relatively high performance made them eminently suitable. Among the first units to use Vampire 5s for advanced training were Nos. 102 and 103 Flying Refresher Schools, respectively based at North Luffenham and Full Sutton, which flew the type early in (Stradishall), 229 OCU (Chivenor), 233 OCU (Pembrey), 1951. Vampire 5s were also operated by 226 OCU by the Fighter Weapons School (Leconfield), Central Fighter Establishment (West Raynham), RAF Flying College (Manby), Central Flying School (Little Rissington), and several advanced Flying Schools, including No. 202 (Valley), 206 (Oakington), 208 (Merryfield).

The AFS's were later re-constituted as Flying Training Schools FTS's where Vampire 5s and 9s continued to serve alongside dual-controlled T.11s until the end of the 'fifties with 1 FTS (Linton-on-Ouse), 4 FTS (Middleton-St-George, and later Valley), 5 FTS (Oakington), 7 FTS (Valley) and 8 FTS (Swindon), as well as with the RAF College at Cranwell.

The last Vampire F.B.5s used actively in Britain were those of No. 3 CAACU at Exeter which were retained until at least 1961.

The Vampire 3 and its derivatives also enjoyed very great success in the export market. Seventy-five were supplied to Switzerland, 50 went to South Africa, and 12 to India, where the F.B.9 variant was produced under

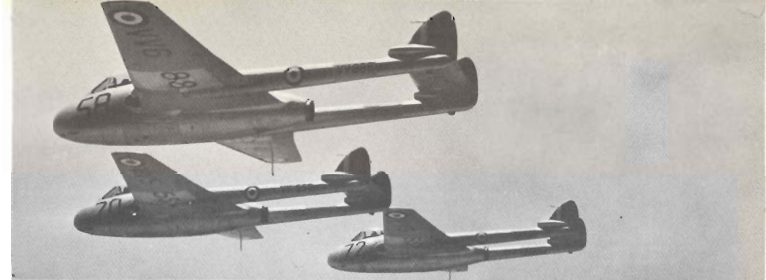
licence by Hindustan Aircraft and later saw action against Pakistan during several border clashes and in the 1965 war. The first export version of the F.B.5, designated F.B.50 was sold to Sweden as the J.28B. The Mark 51 was a designation intended for French Nene-engined variants, while the F.B.52 identified export models powered by the Goblin 3, and was supplied to Norway, Finland, Venezuela, Iraq, Lebanon and Egypt which received 50. Quite a few Egyptian Vampires were shot down during skirmishes with the Israeli Air Force in the early 'fifties, and again during the 1956 Suez operations; at least eight survivors were later given to Jordan. In addition to a few British-constructed aircraft 100 Goblin 3-powered Vampires were built under licence in Switzerland, and designated Vampire F.6, saw service with six fighter squadrons before relegation as trainers, a few of which remain with the Swiss Air Force at the time of writing. As well as receiving a few ex-RAF Vampire 5s from Britain the type was built under licence in Italy as the F.B.52A. Eighty were manufactured by Macchi and Fiat, and featured the lower-powered Goblin 2 engine.

France also received about 30 ex-RAF Vampire 5s, together with components for a further 67 which were assembled by SNCASE. These were the first jets to serve with the French Air Force and were followed by further Goblin-powered F.B.5s built in France, before production switched to the Nene-powered F.B.51. The French Air Force had anticipated that with the Nene the Vampire would have a much better performance, whereas in fact the F.B.51 was little faster than the standard F.B.5. It was discovered that the air intakes were inadequate, and therefore these were extensively re-designed after research conducted by Rolls-Royce, Boulton & Paul, de Havilland and SNCASE. A considerably improved performance resulted from the new intakes, notably a 65% improvement in the initial rate of climb, and a top speed of 574 m.p.h. with the Hispano-Suiza built Nene 102B, making it the fastest of all Vampires. French equipment was fitted to the production version which began to leave the plant at Marignane late in 1951 designated SE-532 Mistral; this was succeeded by the SE-535 variant with equipment changes, and the fitting of a French ejection seat. (SE-532s were later modified to this standard). In all 247 Mistral 532/535s were built before production ended in 1954.

Vampires and Mistrals saw extensive service with the French Air Force, beginning in 1949 with the equipment of several famous home based fighter squadrons with Vampire 5s; in most instances these were replaced by Mistrals, which served in the fighter-bomber rôle being used operationally during the war in Algeria. Later Mistrals were used as advanced trainers until the 1960s.

The Nene-powered Vampire was also produced under licence in Australia, by de Havilland Aircraft Pty. at Bankstown, powered by the CAC-built Nene 2. Apart from minor equipment changes these aircraft were essentially Nene-powered Vampire 3s. Designated Vampire F.30, the first of eighty examples, serialised A79-1 flew on 29 June 1948. These aircraft featured the dorsal "elephant's ears" air intakes. It was found that the cockpit canopy adversely affected the airflow to these intakes under certain conditions and when 29 of these aircraft were later re-built to approximate F.B.5 standards (clipped, and strengthened wings) as F.B. Mark 31s, the dorsal intakes were removed and replaced by supplementary ventral intakes. Two other F.30s, A79-427 and -737 were rebuilt as Mark 32s, which had a cold-air unit in the cockpit and therefore approximated to an F.B.9.

Vampire F.B.9s were also exported from Britain in small numbers: two to Ceylon, ten to Jordan, 15 to Rhodesia and about 30 to New Zealand. The F.B.9 was also built under licence by Hindustan Aircraft in India. In addition over 30 Vampire F.B.9s were used by the Royal Australian Air Force No. 78 Wing based at Hal Far, Malta, between August 1952 and '55. These aircraft belonged to the RAF and retained British serial numbers, but were flown by Nos. 75 and 76 Squadrons, RAAF as part of their overseas commitment to NATO defence. Twelve of these aircraft, operating from RAF Horsham St. Faith in Norfolk took part in the flypast at Odiham



FB.5's of No. 8 FTS Aerobatic Team, Swinderby. Overall silver scheme with yellow T bands.

on the occasion of the Queen's Review of the Royal Air Force, on 15 July 1953, along with 12 Vampires from Flying Training Command, and 12 Vampire night fighters of Fighter Command.

Sea Vampire fighters

Although the Vampire never saw operational service with the Royal Navy, it did gain its place in aviation with that service when it became the first pure jet aircraft to operate from the deck of a carrier. The date was 3 December 1945, the carrier HMS *Ocean*, the pilot Lt.-Cdr. E. M. Brown, RNVR, and the aircraft, LZ 551, the third prototype Vampire 1.

LZ 551 was considerably modified by de Havillands at Christchurch prior to this event, the most noticeable changes being the addition of a V-shaped arrestor hook faired above the jet efflux, the increase in flap area by 40%, and dive brakes by 35%, and strengthened and lengthened main undercarriage. With these modifications the aircraft became the Sea Vampire F.10. Further trials were conducted both ashore and afloat, and a further Vampire 1, TG 426 was converted to similar configuration, followed by several more machines used for continued trials and evaluation, including TG 328, VF 268 and 269 converted from F.1s, and several F.3 conversions. These later aircraft embodied many of the features of the F.B.5, including clipped wings, and were designated Sea Vampire F.20. Known conversions from F.3s included VF 315, which served as a prototype F.20 and VT 795, 804 and 805. An order for 18 more F.20s was placed to give the Fleet Air Arm initial experience of flying jet fighters, and these aircraft were converted from F.3s at the English Electric plant at Salmsbury before leaving the factory, and comprised VV 136-165, the first aircraft flying on 15 October 1948, and the last in June the following year.

Sea Vampire 20s were used by several second-line FAA units, including the Carrier Trials Unit which took part in "Exercise Sunset" during which more than 200 deck landings were made by these aircraft, and a small detachment was also put aboard HMS *Vengeance* in 1950. A Sea Vampire 20, flown by Rear Admiral W. T. Couchman led the flypast of more than 300 FAA aircraft during the Queen's Review of the Royal Navy, at Lee-on-Solent, on 13 June 1953.

Mark 20 Sea Vampires served with Nos. 700, 702, 764 and 787 Squadrons of the FAA before being phased out of service in 1957, after which the majority were scrapped at Lissiemouth.

Known as Sea Vampire F.21s, a few other aircraft of this type were used for undercarriage-less deck landing trials. The bellies of these aircraft were substantially strengthened and the idea was land on a rubberised flight deck, with the undercarriage retracted. Trials took place at the RAE Farnborough, and aboard the carrier HMS *Warrior* in 1949. Only three F.21s were built, the prototype TG 286, and two "production" machines converted from F.3s and basically brought up to F.20 standard, VG 701 and VT 803, both of which later served with 764 Sqdn. Happily the very first prototype Sea

Vampire, LZ 551 still survives today in the Fleet Air Arm Museum at RNAS Yeovilton.

Vampire night fighters

Developed as private venture from the single seat F.6, the de Havilland 113 Vampire night fighter was influenced by the company's wartime Mosquito experience in the choice of side by side seating for the pilot and radar operator. The fuselage nacelle was widened to accommodate the crew and lengthened to accept the airborne intercept radar (A.I.), and additional navigational equipment in the nose. To offset the increased weight compared with single seat Vampires, the night fighter was powered by the higher thrust Goblin 3.

G-5-2, the first prototype, made its maiden flight from Hatfield on 28 August 1949, piloted by G. H. Pike. It exhibited the same excellent handling characteristics as earlier variants, and some initial instability problems were soon rectified by revising the shape of the fins, and extending the tailplane outboard of the booms, and featuring the "bullet"-shaped intersection fairing. Armament comprised four 20mm Hispano cannon in a ventral pack beneath the nose.

The RAF had already decided on the Meteor to satisfy its jet night fighter requirements, and from the outset the D.H.113 had been aimed at the export market. Foreign interest was indeed quickly aroused, and soon after its first public debut at Farnborough in 1949 Egypt placed an order for a dozen D.H.113s, with plans to increase that number. However, shortly afterwards Britain placed an arms embargo on Egypt and it was therefore decided that these aircraft should be transferred to the RAF and supplemented by an additional quantity sufficient to operate the type in squadron service.

In RAF service the D.H.113 became the Vampire NF.10, which reached the first operational unit, No. 25 Squadron at West Malling, Kent, in July 1951. It was followed by Nos. 23 at Coltishall, and 151 at Leuchars in September, and its comparatively short operational career was limited to these three home defence squadrons. Although the Vampire NF.10 possessed a better patrol endurance and more concentrated fire power than its "rival", the Meteor NF.11, it was deemed inferior by virtue of its single power unit—considered something of a disadvantage for night and all-weather flying; the Meteor also had a faster rate of climb, and was 30 m.p.h. faster.

In September 1952 five of 23 Sqn's Vampire 10s took part in Exercise "Hold Fast" operating from Fassberg, in Germany, alongside Vampire 5s, and this squadron also put up a dozen night fighters for the Royal Review flypast at Odiham in July 1953. Later that year the unit became the first RAF Venom night fighter squadron and its Vampire 10s were flown to Maintenance Units, while Nos. 25 and 151 re-equipped with Meteor night fighters early in 1954.

About thirty NF.10s were retained by the RAF after conversion as advanced navigational trainers. The nose-mounted A.I. radar was removed and replaced with navigational radar, including Gee 3 and Rebecca 3; the navigational equipment was still lighter in weight than



A pair of FB.5's of No. 6 Squadron, complete with red Flying Can-opener on the rudder taking off from a desert airfield.

the original radar fit and therefore the four cannons were retained, plus ballast, to maintain the centre of gravity. The Vampire NF.10s used as navigational trainers could be identified by a new, power-jettisoned, clear view canopy similar to that fitted to the Venom NF.2a. night fighter camouflage was retained but with the addition of yellow "training" bands around wings and booms, although silver later replaced the camouflage on those aircraft operated by No. 2 Air Navigation School, which was the first unit to operate the type, with about 14 NF.10s and two Vampire T.11s, based at Thorney Island. No. 1 A.N.S. also received the NF.10, in March 1957, at Topcliffe, and had a strength of nine, plus two T.11s. Vampires were phased out of service with 1 A.N.S. in April 1959, and 2 A.N.S. followed suit two months later. At least one Vampire NF.10, WP 255 "T" (ex. 1 A.N.S.) remained in RAF service until November 1959 as a "hack" with 27 M.U. at Shawbury, where many were scrapped.

A few Vampire 10s had been used for test purposes, including WP 240 which tested the Sea Vixen nose section in 1955, and WP 250 which was modified by Handley Page at Radlett for boundary layer laminar flow wing research from 1953 to 1956 during which time it was fitted with five-foot wing sections outboard of the port tailplane.

The Vampire 10 was also exported as the NF.54 in small numbers to the Italian and Indian Air Forces. The Italian aircraft were diverted from RAF production whereas the Indian aircraft were ex-RAF, delivered in two batches in 1954, and 1957/58 via the Near East and Persian Gulf. A single NF.10 was sold to the Swiss Air Force and became J-1301.

Only 95 Vampire night fighters were built, 62 of them at Chester.

Vampire trainers

Like the night fighter from which it was derived the D.H.115 Vampire Trainer was another private venture by de Havillands, and one which was to pay off most handsomely for the company.

It was a logical step that a dual-controlled trainer should be produced to ease the task of conversion to the Vampire fighter, large quantities of which were being produced in the late 'forties not only for the RAF but for foreign air arms—where the type was often the first jet to be acquired. It was a relatively simple modification to adapt the Vampire night fighter to a trainer, as it already had a wide fuselage and side by side seating for a crew of two; the search radar was replaced by navigational equipment in a re-designed nose section, the top portion of which could be hinged upwards for access to the equipment. The four-cannon armament was retained (although only two guns were usually fitted) partly to maintain

British service chiefs evinced great interest in the type within a few months of its first flight and in 1951 the RAF ordered the D.H.115 in quantity as the Vampire T.11, against specification T.111 to fulfil a new and quite radical step in its future flying training programme. This was to comprise a reduction to only two trainers, each with side by side seating: the piston-engined Percival Provost basic trainer followed by the Vampire T.11 advanced trainer on which students would gain their "wings". This was a departure from the then current procedure which involved several stages of flying training with various types of aircraft culminating in the Meteor T.7, which had tandem seating and was more expensive to operate. The Vampire T.11 was therefore intended to replace the Meteor at the Advanced Flying Schools (A.F.S.) as soon as sufficient quantities became available.

The first of two pre-production T.11s WW 458, flew on 1 December 1951, while the second machine, WW 461 became the first Sea Vampire T.22 for the Royal Navy, which later ordered a further 73 full production T.22s for advanced training with shore-based second line squadrons of the Fleet Air Arm.

Deliveries of full production T.11s for the RAF began in 1952, with serials commencing WZ 414, and later in the year they started to replace Meteor 7s at 208 A.F.S., Merryfield, and 202 A.F.S., Valley, followed by the A.F.S.s at Weston Zoyland, and Oakington, and very many other training units. Another early user was the Armament Practice Station at Acklington where several were used for live gunnery instruction against towed targets.

As the year progressed de Havillands worked on improvements which were deemed necessary following early RAF evaluation, and WZ 419 was accordingly used to incorporate these features—curved fairings forward of the fin roots (in place of the "bullet" fairings), and the replacement of the heavily framed cockpit canopy by a clear view one. During 1953 many of the WZ-serialised aircraft were withdrawn from service and modified to the revised standard, while all Vampire T.11s were later fitted with ejection seats.

In all, 534 Vampire T.11s were produced for the RAF, centre of gravity and partly to enable the aircraft to be used as a weapons trainer. The wings were similar to those of the Vampire FB.5 and could carry drop tanks or bombs and rockets if required.

The first D.H.115, registered G-5-7, was made at Christchurch and made its initial flight in the hands of J. W. Wilson from that airfield on 15 November 1950—although it had been shown statically at Farnborough the previous September. In its original form the Vampire Trainer had fins similar in shape to the FB.5, with greater area to compensate for the longer nose, and without extensions to the tailplane; extensions were later added however.

FB.9's of No. 8 Squadron forming past the barren landscape of Aden.



most of them built by the Caister plant, but also at Hatfield and Christchurch, with some work sub-contracted by Fairey.

In the Vampire T.11 the RAF found an excellent advanced trainer with a performance hardly dissimilar from the standard fighters then in service, and, yet so easy to fly that most students could fly it solo after only three or four hours dual instruction. It remained in use as the standard advanced jet trainer until the early 'sixties, first with the A.F.S.s, and then when these were re-organised, with advanced F.T.S.s (Flying Training Schools): No. 1 F.T.S. at Linton-on-Ouse, (where Royal Navy pilots were trained), No. 4 at Middleton-St-George, and Work-sop, No. 5 at Oakington, No. 7 at Valley, and No. 8 at Swinderby. Many other units in Flying Training Command used Vampire T.11s, including the C.F.S., and the RAF College at Cranwell. They were also used by Fighter Command with 226, 229, 233 OCU's, the C.F.E., with Station Flights, and by many regular fighter squadrons up to about 1958 for continuation training, instrument ratings, and "hacks". The last units to regularly operate RAF Vampire T.11s were both civilian operated—the Central Air Traffic Control School (CATCS) at Shawbury which kept them until December 1970, and No. 3 CAACU at Exeter, which retained them for a further twelve months. Two or three airworthy examples are still held in store at the time of writing, and one such aircraft, XH 304, is flown by the C.F.S. from 5 M.U. Kemble, in company with a Meteor T.7, to participate in air displays.

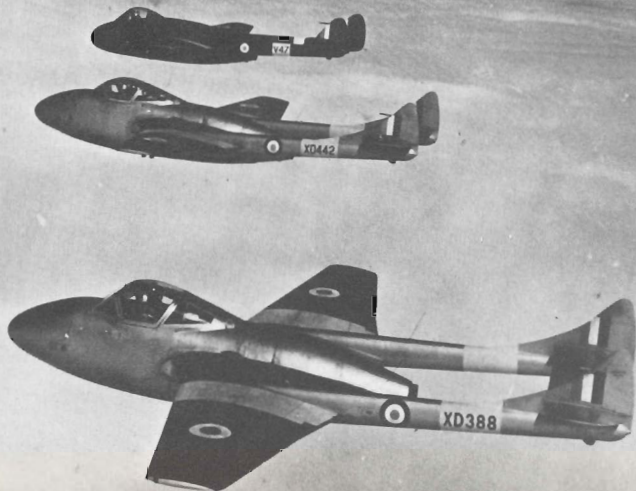
The Royal Navy has also only recently withdrawn the Vampire Trainer from active service during which the T.22 served with Nos. 736, 738, 749 and 764 Squadrons primarily as a weapons trainer and for instrument ratings, with 781 Squadron as a high-speed communications aircraft, with 702, 727 and 750 Squadrons and several Fleet Requirements Units as a continuation trainer, with Station Flights at home and abroad, and with F.O.F.T. as a trainer and "Admiral's Barge"—in which rôle several unusual but very ship-shape colour schemes were devised. The Sea Vampire T.22 also served as a check-out trainer with several jet equipped air squadrons of the RNVR until these units were disbanded in 1957.

A mixed formation from No. 5 FTS Oakington, two silver with yellow T bands T.11's, serials XD388 and XD442 and a camouflaged FB.5 with yellow T bands, VV477. (Flight International)

De Havillands produced another export winner with the Vampire trainer, over 300 of which were sold to more than 20 overseas air forces, while licence production abroad was well in excess of 100 additional aircraft. Although a few ex-RAF Vampire T.11s were sold abroad, the main export version was the T.55 which had a different fit of instruments to suit individual customers, which included Austria, Burma, Ceylon, Chile, Egypt, Eire, Finland, Indonesia, Iran, Jordan, Lebanon, New Zealand, Norway, Portugal, Rhodesia, Syria and Venezuela, with South Africa (21), Sweden (57) as the largest users, in addition to India which received 55, all but five of which were assembled by Hindustan Aircraft in that country. One was also sold to Japan where the type was evaluated but not selected as the standard advanced trainer.

In Australia the Vampire was built by de Havillands at Bankstown, Sydney, total production comprising 36 Mark T.33s for the RAAF which had imported Goblin 35 engines, five Mk. T.34 for the Royal Australian Navy and which approximated to the Sea Vampire 22; these aircraft had old type fins and framed canopies and were later modernised to the latest T.11 standards and fitted with ejection seats—after which the T.33 was re-designated T.35A and the T.34 became the T.34A. Final Australian production centred on the T.35 which had clear view canopy, modified fins, ejection seats, increased internal fuel capacity and non-skid brakes (a feature later fitted to the T.34A and T.35A). Four Sea Vampire T.22s (XA 101, 167, XG 766 and 770) were also supplied to the RAN. Vampire trainers continued to serve in Australia until 1971, when they were withdrawn from active use, and some were offered for sale as executive jets with at least one such example being sold to the US for this purpose. (In Britain, several schemes for the extensive modification of the Vampire T.11 as a multi-seat business jet failed to come to fruition.)

When Vampire production ceased in 1958 a grand total of almost 2,900 aircraft had been completed, over 800 of which were trainers, some of which are still in use with 12 overseas air forces—a remarkable tribute to the efficiency and versatility of this fine de Havilland aeroplane.

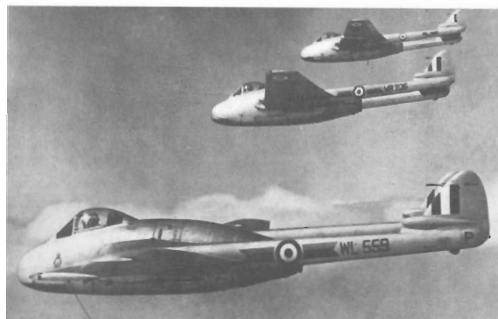




Above: FB.9 of No. 6 Squadron, note the squadron badge on nose and Flying Can-opener insignia on fin. (R. Levy)

PERFORMANCE DATA — MAIN VAMPIRE VARIANTS

Powerplant	VAMPIRE F.1 3,100lb. s.t. de Havilland Goblin 2	VAMPIRE F.B.5 3,100lb. s.t. de Havilland Goblin 2	VAMPIRE N.F.10 3,350lb. s.t. de Havilland Goblin 3	VAMPIRE T.11 3,500lb. s.t. de Havilland Goblin 35
Dimensions				
Span	40ft. 0in.	38ft. 0in.	38ft. 0in.	38ft. 0in.
Length	30ft. 9in.	30ft. 9in.	34ft. 7in.	34ft. 6½in.
Height	8ft. 10in.	8ft. 10in.	6ft. 7in.	6ft. 2in.
Wing Area	266 sq. ft.	262 sq. ft.	262 sq. ft.	262 sq. ft.
Weights				
Unloaded	6,372lb.	7,253lb.	6,884lb.	7,380lb.
Loaded	10,480lb.	12,360lb.	13,100lb.	11,150lb.
Performance				
Max. Speed	540 m.p.h.	535 m.p.h.	538 m.p.h.	538 m.p.h.
Initial rate of climb	4,300 ft./min.	4,050 ft./min.	4,500 ft./min.	4,500 ft./min.
Service ceiling	44,500ft.	40,000ft.	40,000ft.	40,000ft.
Range	730 miles	1,170 miles	1,220 miles	840 miles



Left: Three FB.9's of No. 8 Squadron with the recently introduced squadron marking of sand, blue and red stripes fore and aft of the roundel, a few camouflaged Vampires also received this marking before camouflage was removed. (via R. C. B. Ashworth)



Below: FB.5 of No. 10 Squadron on the scrap-heap, note black tail-boom band outlined with yellow, black acorns and wing-tips, stencil style serial. (R. Levy)

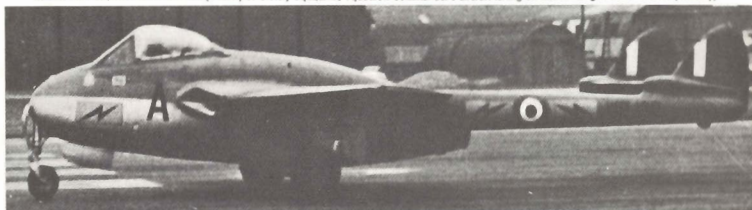


Above: Sporting the insignia borne on Hurricanes in the Western Desert, an FB.5 of No. 73 Squadron. (R. Levy)



Above: D, an FB.5 of No. 501 Squadron, Royal Auxiliary Air Force immaculate with the squadron badge on nose and yellow and black markings on tail-boom, note yellow wing-tips. (R. Levy)

Below: An FB.9, WR128 of No. 502 (County of Ulster) Squadron, Squadron Commander's aircraft taking off from Aldergrove, N. Ireland. (R. Levy)

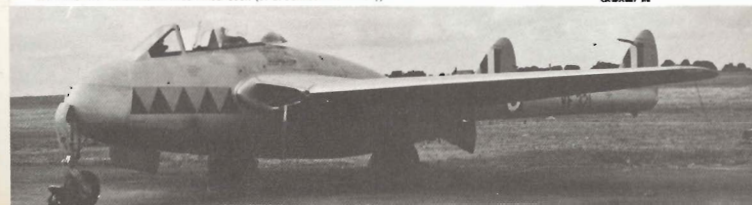


Below: WA432 an FB.5 of No. 603 (City of Edinburgh) Squadron, markings are medium and light blue checks between black bands, squadron badge on disc on nose. (J. M. Gradidge via R. Levy)



Below: F.3 VF321 of No. 604 Squadron photographed at North Weald in 1952 shortly after the red and yellow squadron markings had been applied to the nose; note red sword on nose-wheel door. (J. G. Johnson via R. Levy)

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Above: An FB.5 of No. 607 Squadron with the yellow and purple squadron markings on tail-booms and wing-tips, black J on nose, nose-wheel door and boom. (E. Taylor via R. Levy)

Below: FB.9 of No. 607 Squadron flown by the OC, grey and green uppers, silver unders, yellow B and Sqdn. Ldrs. pennant on nose. Yellow and purple squadron markings on tail-booms and wing-tips. (Raymond Rayner via R. Levy)



Below: FB.5 of No. 608 Squadron in standard grey, green and silver camouflage with white K on nose and boom. Marking is blue and red with diagonal green stripes repeated fore and aft of roundel. (R. Levy)

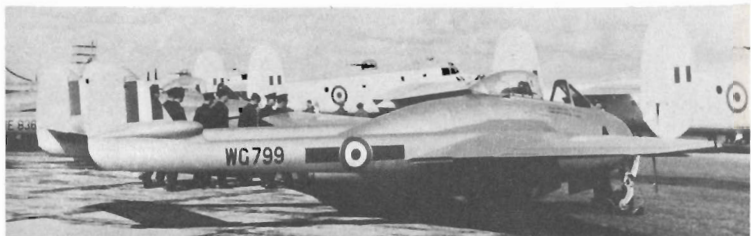


Below: An FB.5 of No. 613 Squadron in grey, green uppers and 2nd TAF blue unders; squadron marking is green, yellow, green, squadron badge on nose, black E on boom. (J. M. Gradidge via R. Levy)





Above: FB.5 of No. 614 (County of Glamorgan) Squadron in silver finish with green and red squadron markings, black F on nose.
(J. M. Gradidge via R. Levy)

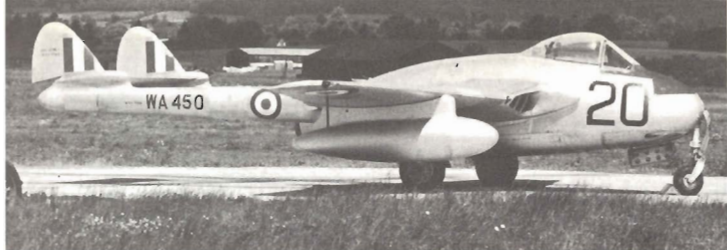


Above: FB.5 of No. 614 Squadron, silver finish with black A on nose.



Above: An FB.5 of No. 3 CAACU, Exeter, 1959. Note FB.9 type wing root fairing. White serial and nose code and below another camouflaged FB.5 of the same unit with black serial and code and yellow T bands. (J. G. Johnson via R. Levy)





Above: An overall silver finish FB.5 with orange dayglo T bands, black serial, code and anti-dazzle panel. No. 3 CAACU, Exeter, 1959.

(J. G. Johnson via R. Levy)



Above: WR211 an FB.9 entered in the Kings Cup Air Race 1952, overall silver finish with black 98 on white disc. (J. G. Johnson via R. Levy)



Above ES-E and below RS-H, FB.5's of No. 229 OCU on the scrap-heap at Sillith, 1958. Black codes and serial on standard camouflage. (R. Levy)





Above: T.11 of No. 19 Squadron in silver scheme with yellow T bands and blue and white checks on the tail-booms. Photographed at Church Fenton, 1958. (R. Levy)

Below: T.11 of No. 56 Squadron with red and white checks and squadron badge on nose and red and white checks on wing-tips. Yellow T bands. (via R. C. B. Ashworth)



Below: T.11 of No. 219 Squadron, a Venom NF.2 sqdn. Squadron markings are black with red arrowheads. Silver scheme with yellow T bands. Ouston, 1956. (R. Levy)



Below: T.11 of Leuchars Station Flight sporting the markings of Nos. 151 and 43 Squadrons, silver finish with yellow T bands. (J. G. Johnson via R. Levy)





Above: T.11 of No. 1 FTS, Linton-on-Ouse. Orange dayglo on silver finish, fin-tips grey. (R. Levy)



Above: T.11 of No. 4 FTS, Valley. Orange dayglo strips on nose, overall on booms and fins. (R. Levy)



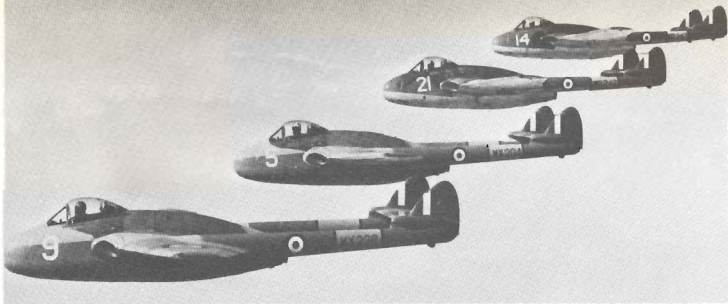
Above: T.11 of No. 5 FTS with orange dayglo strips on nose, tail-booms and tanks, purple-blue square round black 54. Photographed shortly after arrival at No. 3 CAACU, Exeter, 1963. (via R. Levy)



Above: Camouflaged FB.9 with yellow T bands of No. 7 FTS, Valley. White 21 on nose. (via R. C. B. Ashworth)

Below: Overall silver FB.5 of No. 7 FTS with yellow T bands and black code. (via R. C. B. Ashworth)





Above: Neat formation by FB.5's and 9's of No. 7 FTS, note 14 WR247 and 21 WR242 are in green/grey uppers with silver unders and yellow T bands whilst 5 WX204 and 9 WX226 are in grey/green uppers and azure blue unders, all with yellow T bands. (via J. W. R. Taylor)



Above: T.11 of No. 8 FTS, Swinderby, orange dayglo strips on nose and tail-booms. (R. Levy)



Above: T.11 in silver and orange dayglo scheme with the rare serial of XJ775 photographed at Waddington in September 1961. (R. Levy)



Above an FB.9 and below a T.11 of the Royal Air Force College, Cranwell. (via R. C. B. Ashworth)





Above: T.11 of the RAF College, Cranwell in silver and orange dayglo scheme. Tail bands are pale blue lined with dark blue, codes black. (R. Levy)



Above DN and below VP of the Central Flying School, silver with yellow T bands, note DN carries the CFS insignia on the nose after the code.



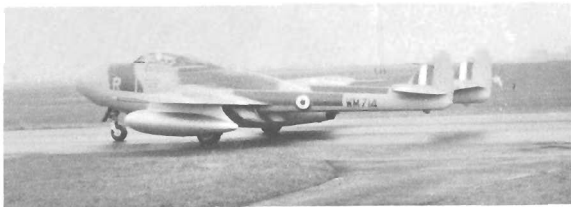
Below: T.11 WZ477 of the Sylt Station Flight, silver finish with yellow T bands. (via R. C. B. Ashworth)



Below: T.11 XK634 in silver finish with yellow T bands photographed at Church Fenton in October 1957. (Raymond Rayner via R. Levy)



Right: T.11 WH-J of the Air Practice School, Acklington, shortly after this photograph was taken the yellow and black unit markings were painted on the tail-booms. (R. Levy)

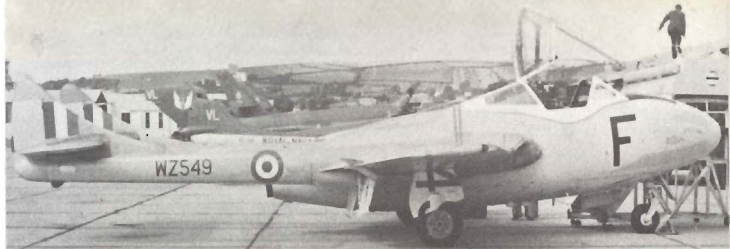


Above: NF.10's WM714 R and below WP248 X in pale grey and green scheme with yellow T bands of No. 1 ANS. Codes are yellow. (R. Levy)

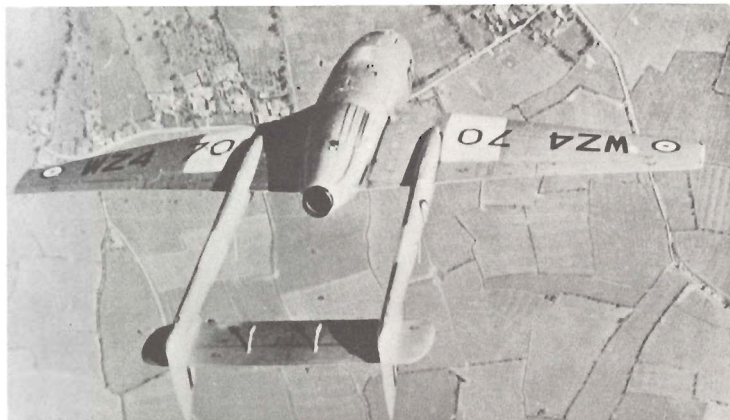


Above: WP238 J an NF.10 of No. 1 ANS in similar scheme to R and X but with code in black, and below, an overall silver T.11 with yellow T bands and black code. (via R. C. B. Ashworth)





Above: T.11 F/CATCS in overall pale grey finish except for the white canopy frames, photographed at Chivenor 1969. (R. Montgomery via R. Levy)



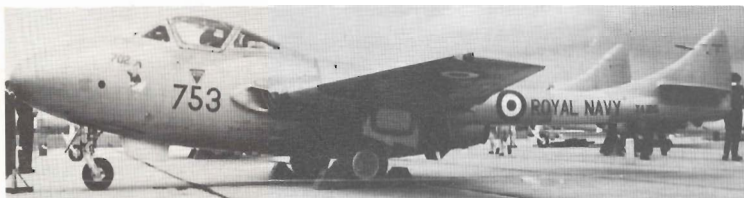
Above: A T.11 coming out the top of a loop showing clearly the serial position on the under surfaces and the early small size roundels.
(via A. P. de Jong)

Below: Sea Vampire T.22 970-AC of the Abbotsinch Station Flight in silver scheme with orange dayglo on nose, wings and tail-booms. (R. Levy)





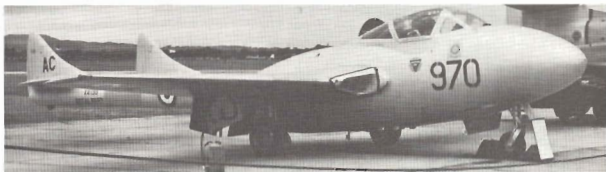
Above: Sea Vampire F.20 of No. 764 Squadron, Ford. (R. Levy)



Above: Sea Vampire T.22 of No. 702 Squadron, Ford. Silver finish with yellow T bands, black 753 "Donald Duck" motif in traditional colours, 702 believed in blue. (via R. Levy)



Above: Sea Vampire T.22 of No. 723 Squadron, Brawdy. Silver finish with yellow T bands, scarlet Britannia's head on nose, black 557. (R. Levy)



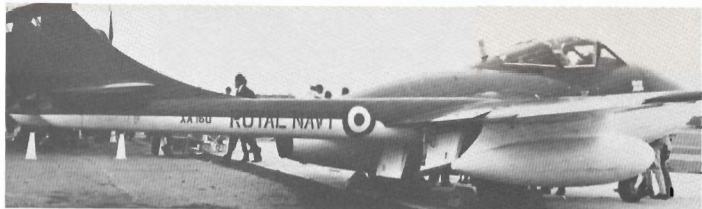
Right: Sea Vampire T.22, Abbotsinch Station Flight in silver scheme with yellow T bands. (R. Levy)

Right: Sea Vampire T.22, No. 750 Squadron, Halfar, Malta, 1964. (R. C. B. Ashworth)





Above: Sea Vampire T.22, FOFT, RNAS Yeovilton, 1962.



Above: Sea Vampire T.22 "Admirals Barge" used by No. 781 Squadron, RNAS, Lee-on-Solent, 1963. (S. P. Pelz)

Right: three-quarter front view of the same aircraft.

(via R. C. B. Ashworth)

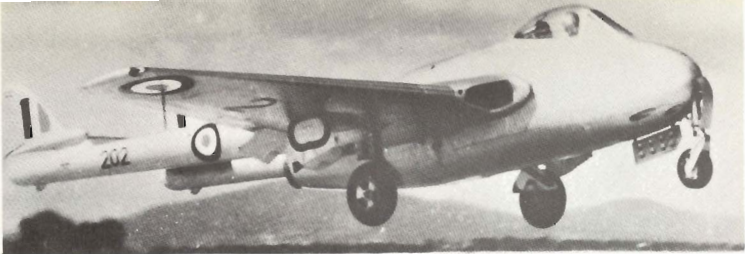


Below: Sea Vampire T.22, FOFT, RNAS Yeovilton, 1963. (R. Levy)



Below: Sea Vampire T.22, FOFT, RNAS Yeovilton in overall silver finish with black lettering, tank colours are unknown. (S. P. Pelz)

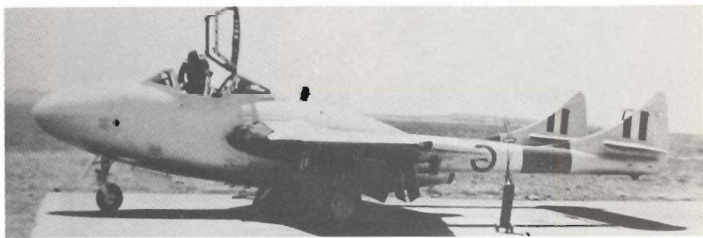




Above: F.5 202, South African Air Force, the second aircraft to be delivered taking off from Fisantekraal on a test flight. Orange centres to roundels. (SAAF)



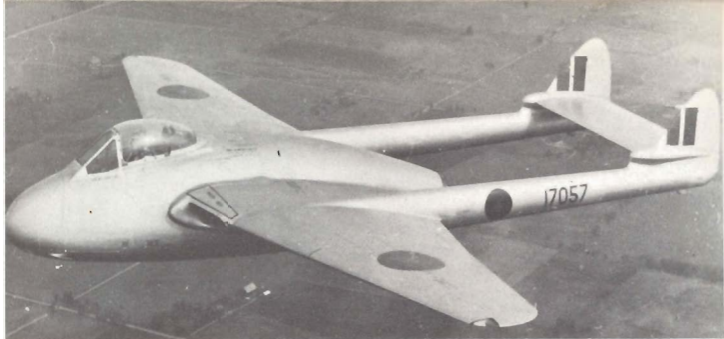
Above: 208 in overall silver finish with the present day insignia. (via R. C. B. Ashworth)



Above: T.55 258 in silver scheme with orange red T bands and orange Springbok in roundel.

Below: T.55 270, one of 26 delivered to the SAAF in present day insignia with orange red dayglo T bands, nose and wing-tips. (SAAF via Ken Smy)



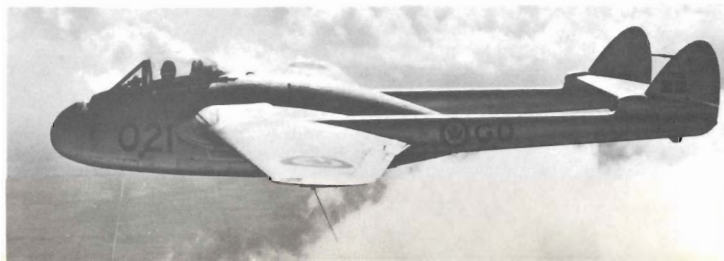


Above: F.3 in silver scheme with the 1948 Royal Canadian Air Force insignia of red Maple leaf on blue roundel. (De Havilland)



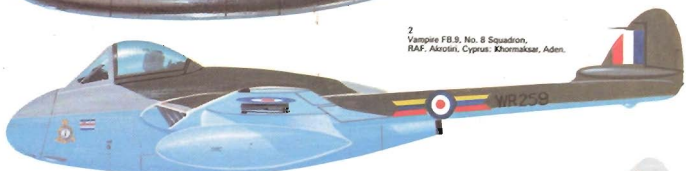
Above: Formation of F.3's of the RCAF with the white centre added to the insignia. (De Havilland)

Below: F.3 of No. 438 Squadron, RCAF. Serial is 17021. (via J. W. R. Taylor)





1
Vampire FB.9, No. 6 Squadron,
RAF, Habbaniya, Iraq.



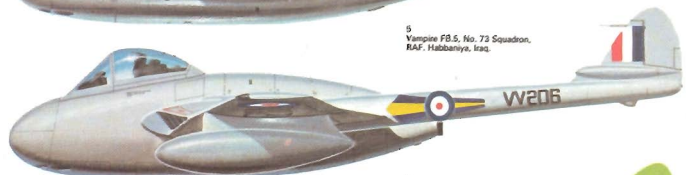
2
Vampire FB.9, No. 8 Squadron,
RAF, Akrotiri, Cyprus; Khormaksar, Aden.



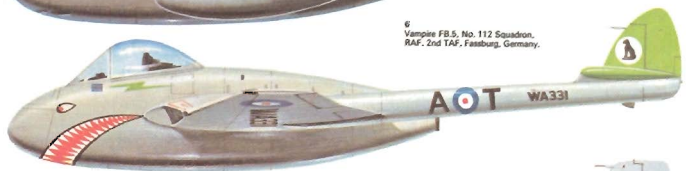
3
Vampire NF.10, No. 23 Squadron,
RAF, Coltishall, UK.



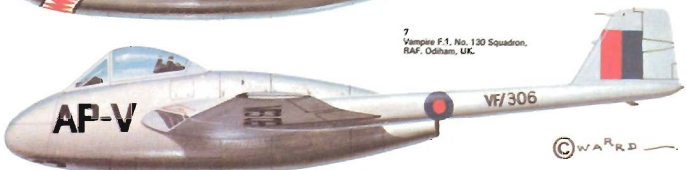
4
Vampire FB.9, No. 60 Squadron,
RAF, Tengah, Singapore.



5
Vampire FB.5, No. 73 Squadron,
RAF, Habbaniya, Iraq.



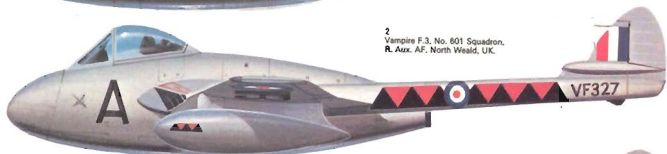
6
Vampire FB.5, No. 112 Squadron,
RAF, 2nd TAF, Fassburg, Germany.



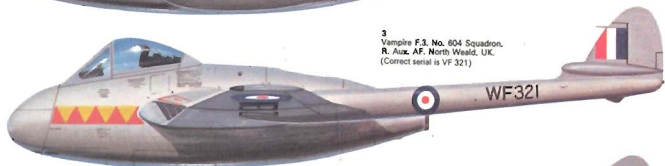
7
Vampire F.1, No. 130 Squadron,
RAF, Odiham, UK.



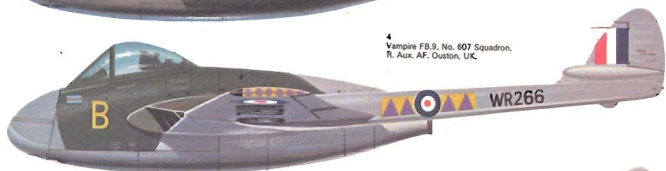
1
Vampire FB.9, No. 602 Squadron,
R. Aux. AF, Aldergrove, N. Ireland.



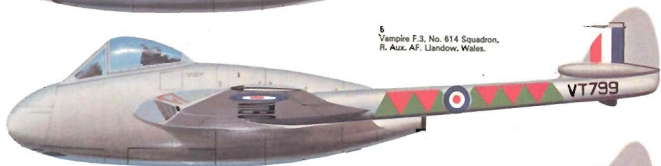
2
Vampire F.3, No. 601 Squadron,
R. Aux. AF, North Weald, UK.



3
Vampire F.3, No. 604 Squadron,
R. Aux. AF, North Weald, UK.
(Correct serial is VF 321)



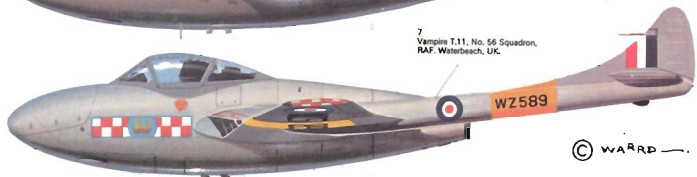
4
Vampire FB.9, No. 607 Squadron,
R. Aux. AF, Ouston, UK.



5
Vampire F.3, No. 614 Squadron,
R. Aux. AF, Llandow, Wales.

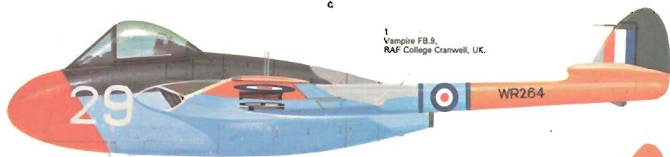


6
Vampire T.11, No. 43 Squadron,
RAF, Leuchars, Scotland.



7
Vampire T.11, No. 56 Squadron,
RAF, Waterbeach, UK.

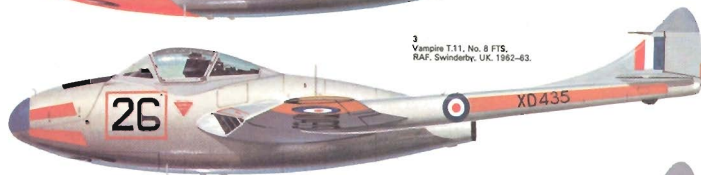
1
Vampire FB.9,
RAF College Cranwell, UK.



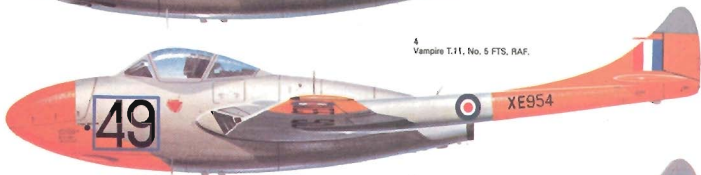
2
Vampire T.11,
RAF College Cranwell, UK.



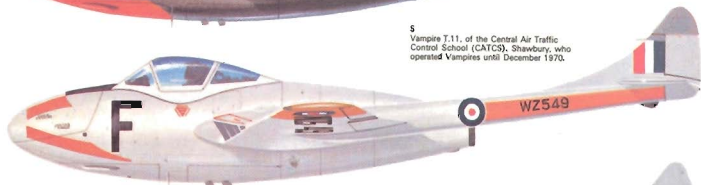
3
Vampire T.11, No. 8 FTS,
RAF, Swinderby, UK, 1962-63.



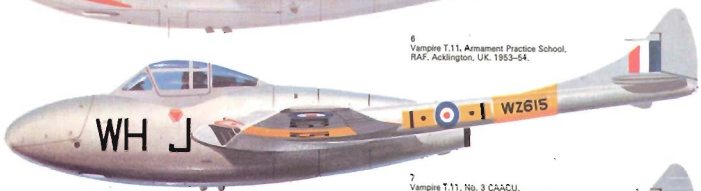
4
Vampire T.11, No. 5 FTS, RAF.



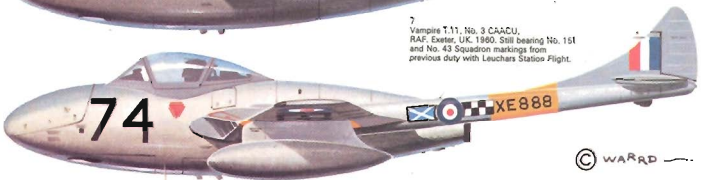
5
Vampire T.11, of the Central Air Traffic
Control School (CATCS), Shawbury, who
operated Vampires until December 1970.

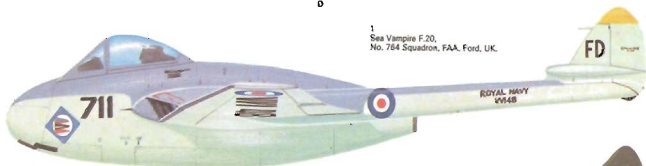


6
Vampire T.11, Armament Practice School,
RAF, Acklington, UK, 1963-64.

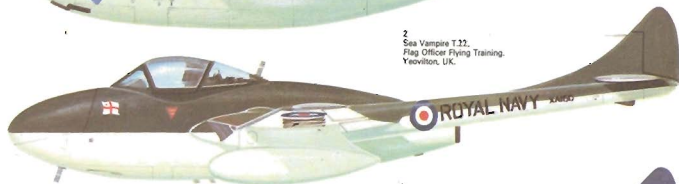


7
Vampire T.11, No. 3 CAACU,
RAF, Exeter, UK, 1960. Still bearing No. 151
and No. 43 Squadron markings from
previous duty with Leuchars Station Flight.





1
Sea Vampire F.20,
No. 784 Squadron, FAA, Ford, UK.



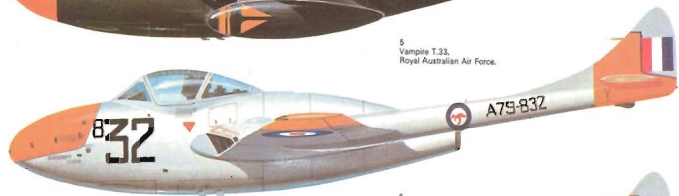
2
Sea Vampire T.22,
Flag Officer Flying Training,
Yeovilton, UK.



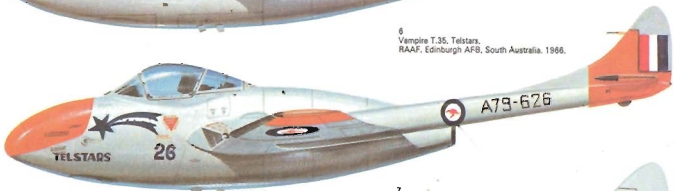
3
Sea Vampire T.22,
Flag Officer Flying Training,
Yeovilton, UK.



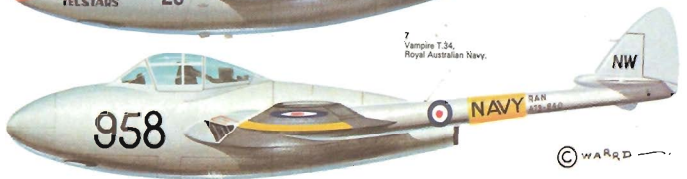
4
Sea Vampire T.22,
Flag Officer Flying Training,
Yeovilton, UK.



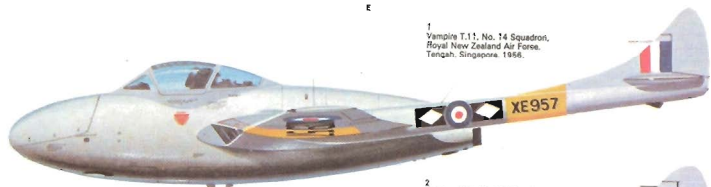
5
Vampire T.33,
Royal Australian Air Force.



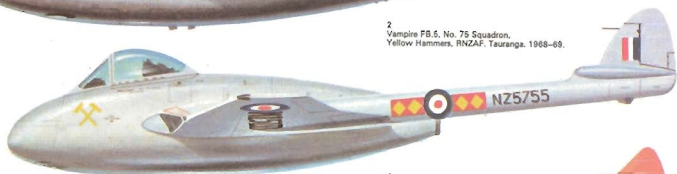
6
Vampire T.35, Telstars,
RAAF, Edinburgh AFB, South Australia. 1966.



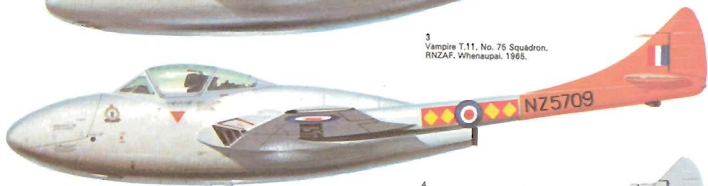
7
Vampire T.34,
Royal Australian Navy.



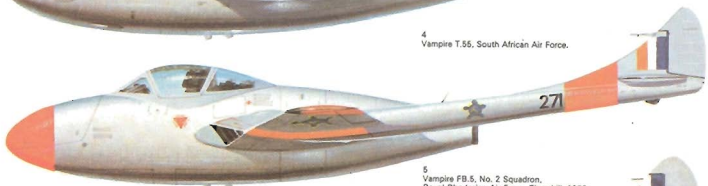
1
Vampire T.11, No. 14 Squadron,
Royal New Zealand Air Force,
Tengah, Singapore, 1956.



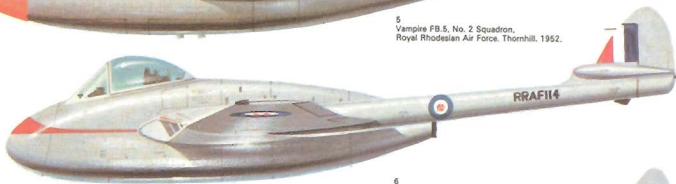
2
Vampire FB.5, No. 75 Squadron,
Yellow Hammers, RNZAF, Tauranga, 1968-69.



3
Vampire T.11, No. 75 Squadron,
RNZAF, Whenuapai, 1968.

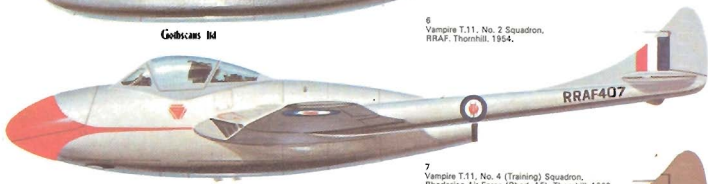


4
Vampire T.55, South African Air Force.

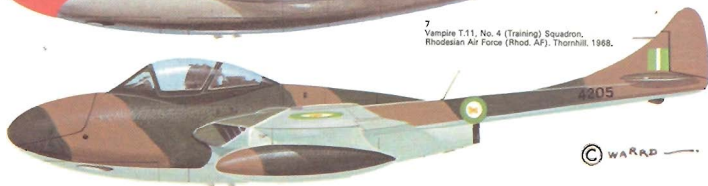


5
Vampire FB.5, No. 2 Squadron,
Royal Rhodesian Air Force, Thornhill, 1952.

Goodscans Ltd



6
Vampire T.11, No. 2 Squadron,
RRAF, Thornhill, 1954.



7
Vampire T.11, No. 4 (Training) Squadron,
Rhodesian Air Force (Rhod. AF), Thornhill, 1968.



1
Vampire F.3, No. 438 Squadron,
Royal Canadian Air Force.



2
Vampire FB.5, 2/4 Escadron
"Lafayette", French Air Force.



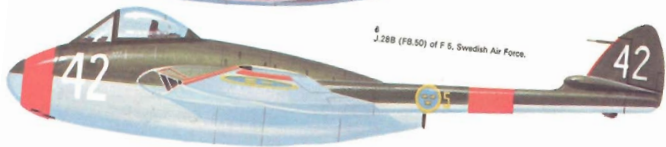
3
SNCASE Mistral of 57.S. Aéronavale.



4
FB.52 of the 4th Aerobrigata
"Cavalino Rampante", Italian Air Force.



5
FB.50 of the Royal Norwegian Air Force.



6
J.28B (FB.50) of F 5, Swedish Air Force.

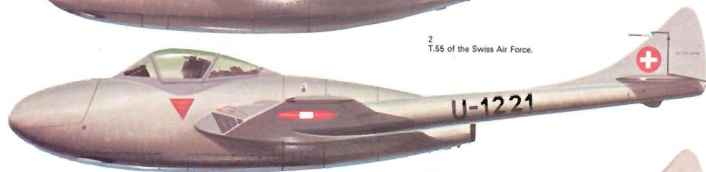


7
T.11 of F 5, Swedish Air Force.

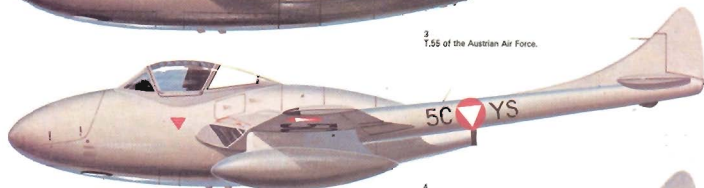
1
FB.8 of the Swiss Air Force.



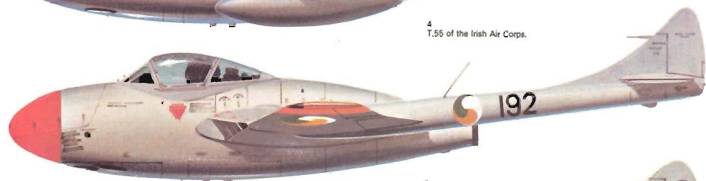
2
T.55 of the Swiss Air Force.



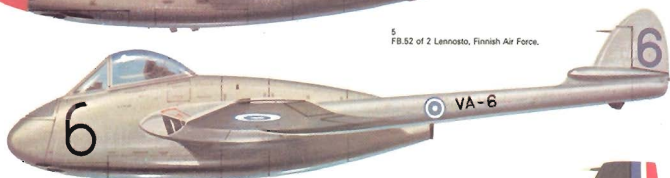
3
T.55 of the Austrian Air Force.



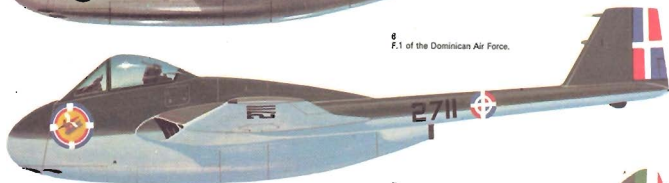
4
T.55 of the Irish Air Corps.



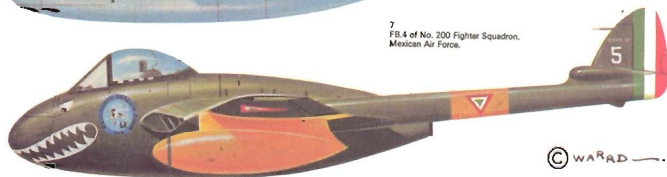
5
FB.52 of 2 Lennosto, Finnish Air Force.

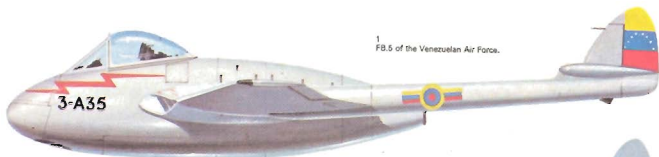


6
F.1 of the Dominican Air Force.

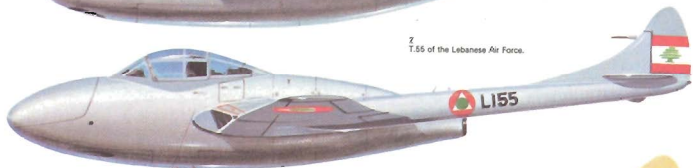


7
FB.4 of No. 200 Fighter Squadron,
Mexican Air Force.

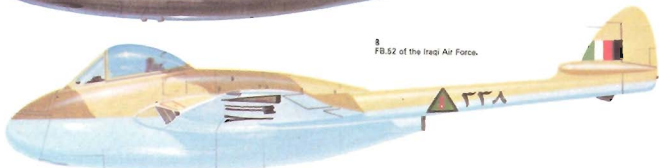




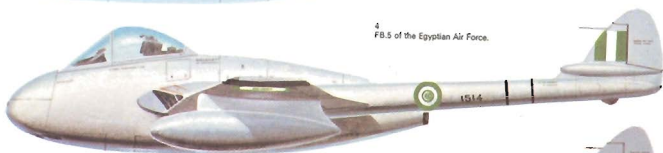
1
F8.5 of the Venezuelan Air Force.



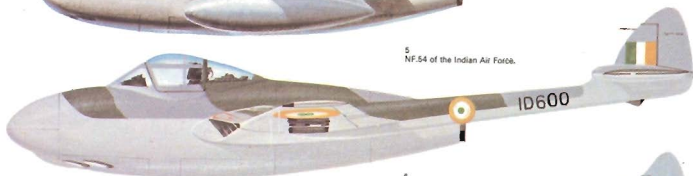
2
T.55 of the Lebanese Air Force.



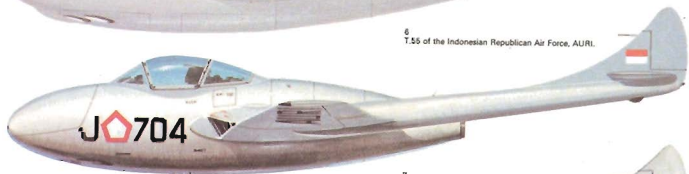
3
FB.52 of the Iraqi Air Force.



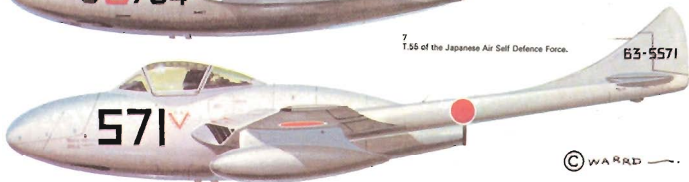
4
FB.5 of the Egyptian Air Force.



5
NF.54 of the Indian Air Force.



6
T.55 of the Indonesian Republican Air Force, AURI.



7
T.55 of the Japanese Air Self Defence Force.



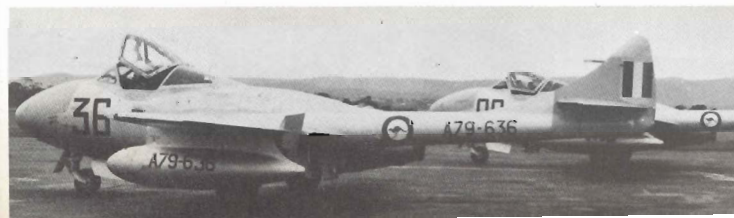
Above & below: F.30's of the Royal Australian Air Force in overall silver finish. (via R. C. B. Ashworth)



Below: An F.30 with the serial A/1/10 and the legend 24 City of Adelaide Squadron on the nose. (via R. C. B. Ashworth)



Above & below: T.35's of the Central Flying School, Llanherne. Silver scheme with orange dayglo. (via R. C. B. Ashworth)

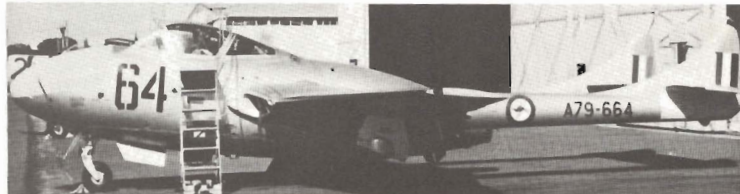




Above & below: Two of the 36 T.33's operated by the RAAF. Standard silver and orange dayglo finish, note radome under fuselage.
(via R. C. B. Ashworth)

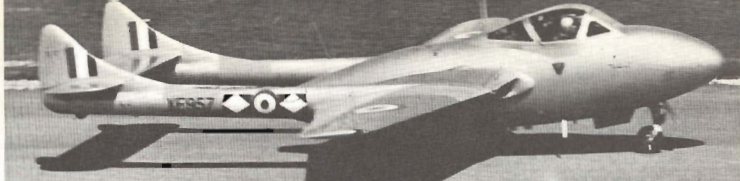


Above & below: A pair of T.35's of the CFS Llanherne in standard trainer scheme.



Above: T.55 of the Royal Australian Navy, serial A79/840. (via R. C. B. Ashworth)





Above: T.11 XE957 in the markings of No. 14 Squadron, Royal New Zealand Air Force taxiing along the runway at Tengah, Singapore in 1956. Silver finish with yellow T bands, black and white squadron markings. (via J. G. Johnson)



Above: T.11 of No. 14 Squadron, RNZAF. Note Kiwi on tail-boom roundels, yellow Rescue arrow, radome under fuselage. (RNZAF via D. A. Noble)



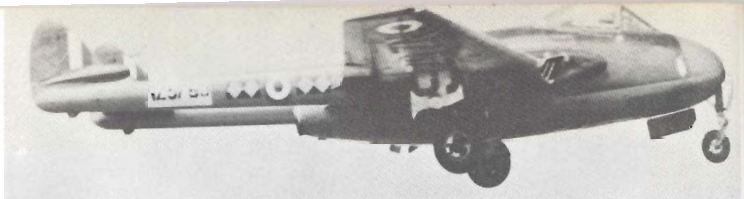
Above: FB.9 of No. 14 Squadron in overall silver finish, squadron markings, Kiwi in roundel and under fuselage radome.



Above: T.11 of No. 75 Squadron in silver finish with orange dayglo booms and tail unit. Whenuapai, 1965. (D. A. Noble)

Below: FB.5 in standard green/grey RAF camouflage. Instructional airframe hence the legend INST167 aft of the serial. (R. F. Killick via D. A. Noble)

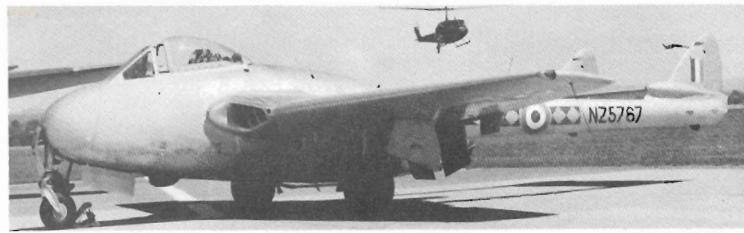




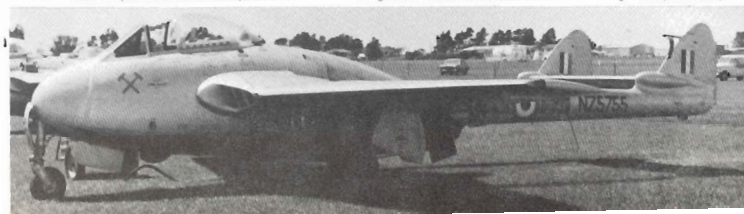
Above: N25753 an FB.9 of No. 75 Squadron in standard RAF green/grey uppers and silver unders. (RNZAF via D. A. Noble)



Above: An FB.9 of No. 75 Squadron at Tauranga. (D. A. Noble) Below: an FB.5 also of No. 75 Squadron both in similar schemes except for fin flashes. (K. R. Meehan via D. A. Noble)



Above & below: A pair of FB.5's of No. 75 Squadron, N25755 in the markings of the "Yellow Hammers" Aerobatic Team, Tauranga 1969. (D. A. Noble)

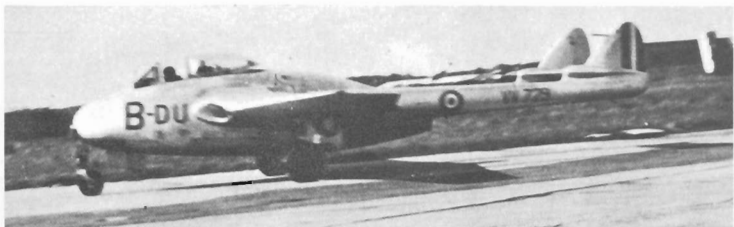




Above: F.1 of the first evaluation batch delivered to the French Air Force in the then standard RAF scheme of grey uppers and blue unders, flash and roundels in standard French colours but all roundels without the yellow outer ring. (ECA via J. Cuny)

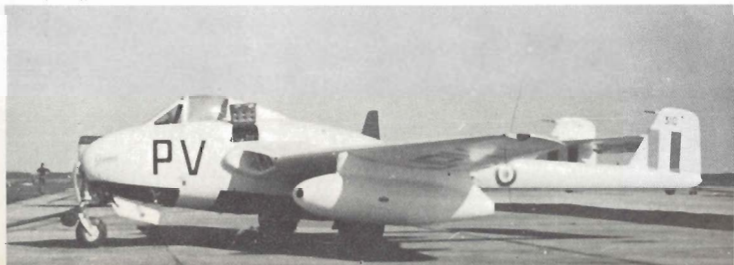


Above: An FB.5 of a Moroccan based unit in the early fifties, scheme is standard RAF with AH in black on nose. (J. Cuny)



Above: FB.5 of an unknown unit taxiing along the runway at Bordeaux-Mérignac. Overall silver scheme, code B-DU and serial VV729 in black, yellow surround to roundels. (J. Cuny)

Below: All white radio controlled target drone F.1, one of three each bearing the name of one of the "Three Musketeers" on the nose, illustrated is Aramis. 1957. (J. Cuny)

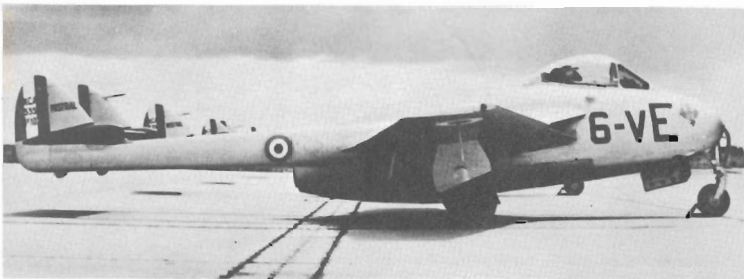




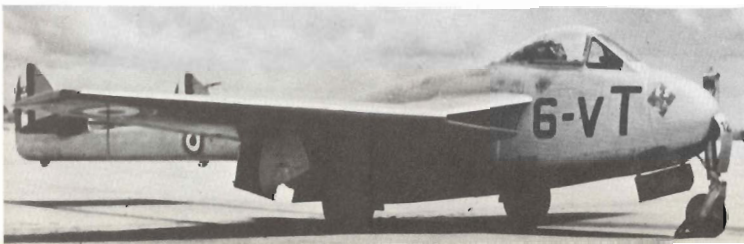
Above: FB.5 VZ221 of 2/4 "Lafayette" Escadron. (ECA via J. Cuny)



Above: FB.5 of an unknown unit at Bordeaux-Mérignac during 1951. Serial VX961 and code in black, codes were repeated in RAF style on the wing under surfaces. (J. Cuny)



Above & below: Two views of an SNCASE Mistral of an unknown unit, note different intake. (J. Cuny)





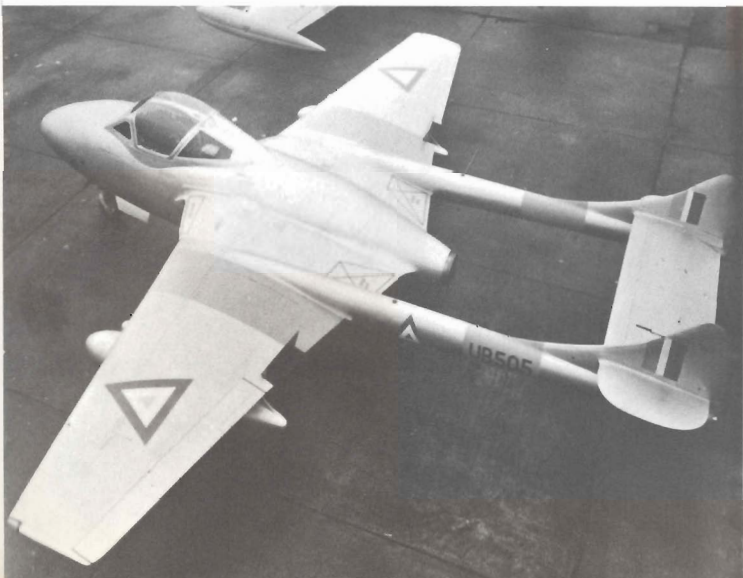
Above: T.55 of the Irish Air Corps in overall silver finish, 191 in black. (S. P. Peltz)



Right, both pictures: T.55's 193 and 186 of the Irish Air Corps with the addition of orange dayglo on nose and wing-tips. (via R. C. B. Ashworth)



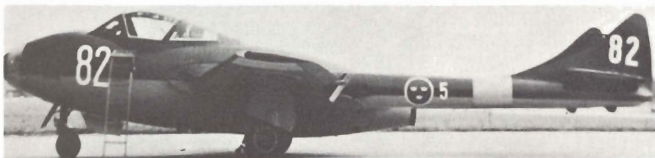
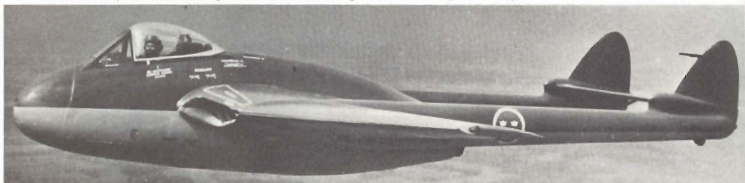
Below: T.55 in the markings of the Union of Burma Air Force, note yellow T bands and red "Keep Off" areas. (De Havilland)



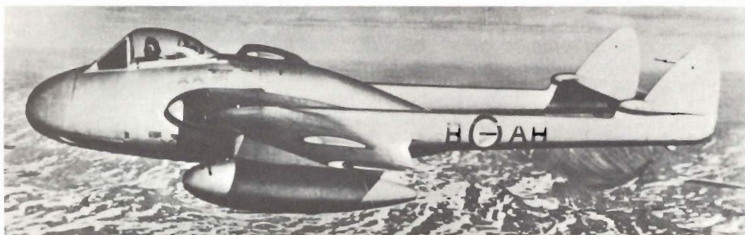


Above: Line-up of J 28B's (FB.50) of F 13 of the Swedish Air Force. Note wing tanks. (De Havilland)

Below: A factory fresh J 28B showing stencil detail and camouflage demarcation line. (De Havilland)

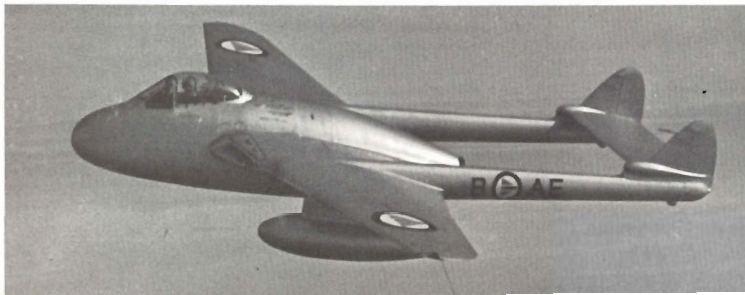


Above: T.11 in the markings of F 5, Swedish Air Force. (via R. C. B. Ashworth)



Above: FB.52 of the Royal Norwegian Air Force, the code AH was the old WWII code of No. 332 Squadron. Overall silver finish. (Maj. Finn Lillevik)

Below: Another FB.52 of the R. Nor. AF coded AE-B in black. Unit unknown. The two units which flew the Vampire were No. 336 and 337 Squadrons. (De Havilland)



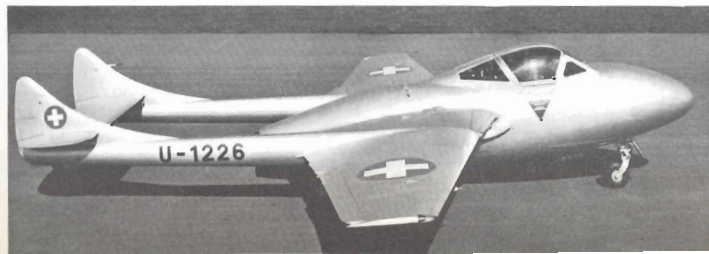


Above: An FB 6 of the Swiss Air Force banking over typical Alpine scenery. (via A. P. de Jong)

Below: Line-up of Swiss FB.6's.

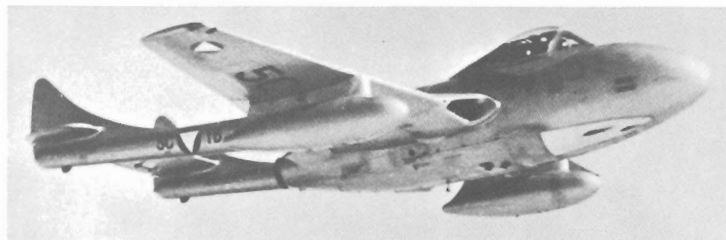


Below: Swiss Air Force Vampire T.55 trainer taxiing along the runway at Dubendorf Airfield. (Swiss AF via G. Hoch)





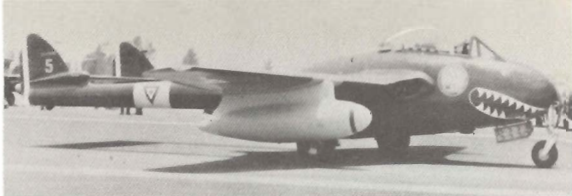
Above: Line-up of Swiss T.55's. (top via J. W. R. Taylor and above via R. C. B. Ashworth)



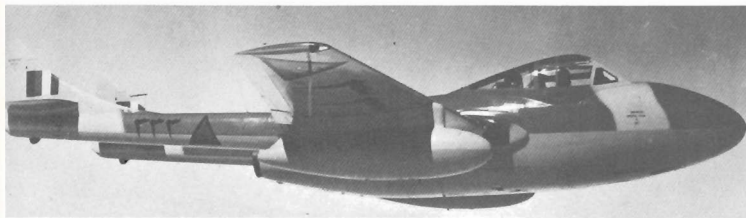
T.55's of the Austrian Air Force, above 5C+YB and below 5C+YS. (via J. W. R. Taylor and S. P. Peltz)



Right: Sharkmouthed FB.4 of No. 200 Fighter Squadron, Mexican Air Force.
(Jose Villeda Jr.)



Below: Lebanese Air Force T.55 in overall silver finish with orange dayglo boom and wing bands. (via R. C. B. Ashworth)

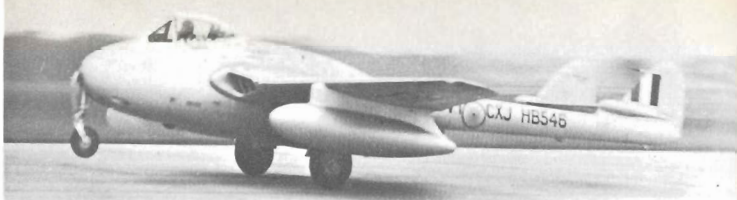


Above & right: T.55 333 of the Iraqi Air Force displaying the early and late fin flash. (De Havilland and R. C. B. Ashworth)



Below: FB.5 HB546 of the Indian Air Force displaying the very early fuselage marking. (De Havilland and via R. C. B. Ashworth)





Above & right: FB 5 HB546 of the Indian Air Force displaying the very early fuselage marking; (De Havilland and via R. C. B. Ashworth)



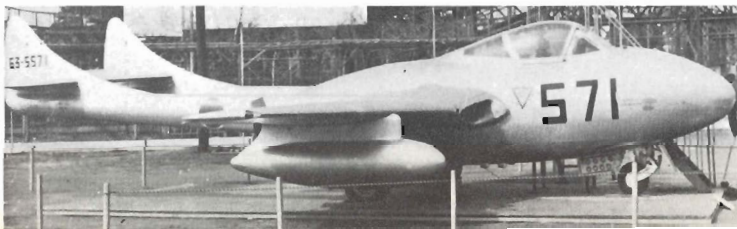
Right: NF.54 of the Indian Air Force in standard RAF camouflage scheme. (via R. C. B. Ashworth)



Below: T.55 of the Indonesian Republican Air Force. (Hugo Hooftman)

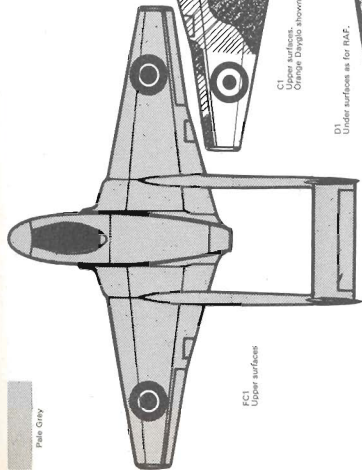


Below: The one and only T.55 bought and evaluated by the Japanese Air Self Defence Force. (S. P. Peltz)

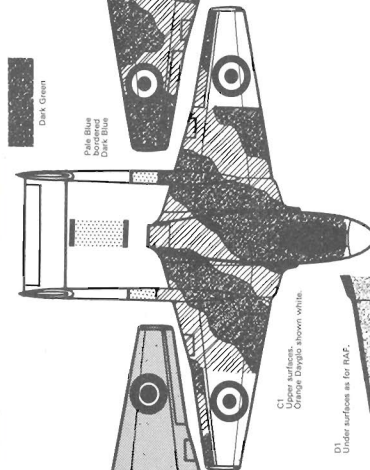




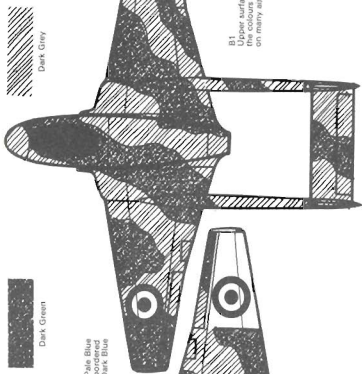
Pale Grey



FC1
Upper surfaces



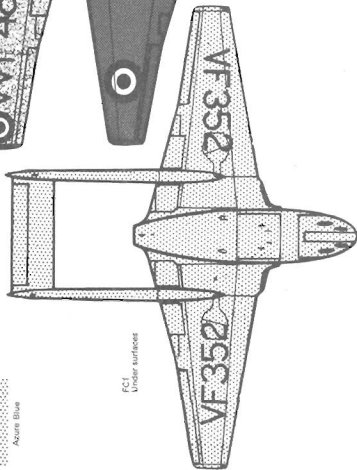
C1
Upper surfaces.
Orange Dargula shown white.



B1
Upper surfaces.
Orange Dargula shown white.
on many aircraft.



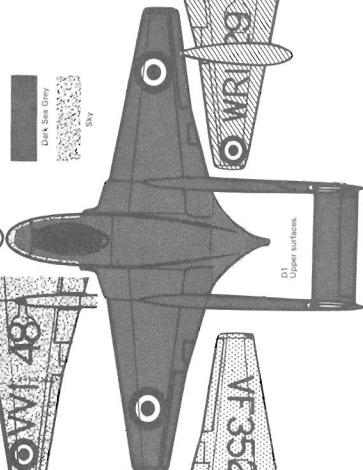
Azure Blue



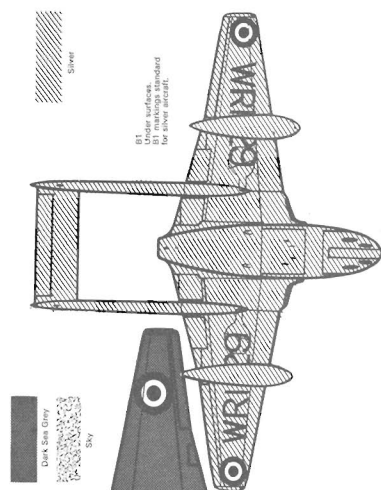
FC1
Under surfaces



D1
Under surfaces as for RAF.



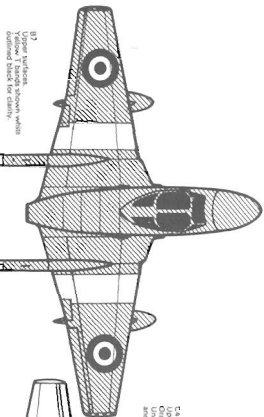
D1
Upper surfaces.



B1
Under surfaces.
Orange Dargula shown white.
on many aircraft.

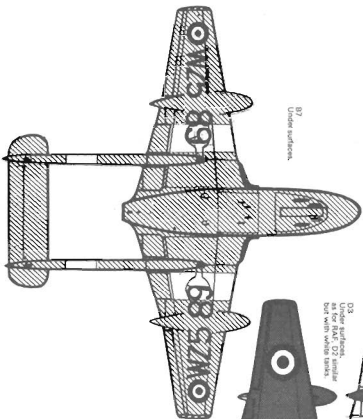


Silver



B7
Upper surface:
Hatched. Lower surface:
Painted black for clarity.

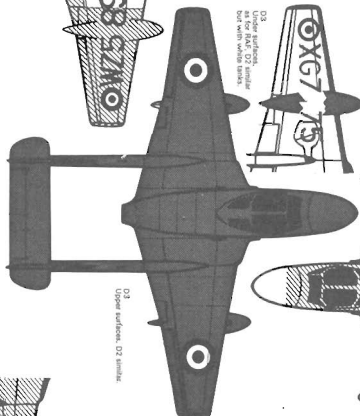
B7
Under surface.



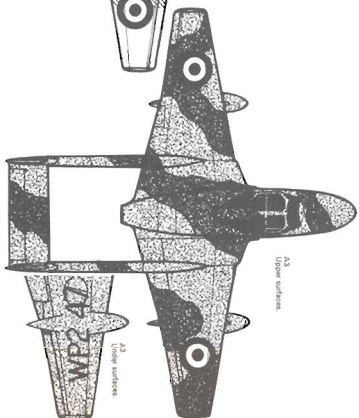
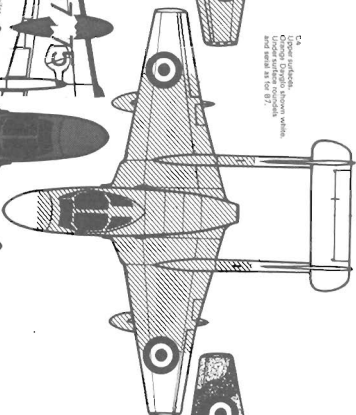
C4
Upper surface:
Hatched. Lower surface:
Painted black for clarity.
Under surface: rounded
and solid as for B7.



D3
Upper surface:
Hatched. Lower surface:
Painted black for clarity.
Under surface: rounded
and solid as for B7.

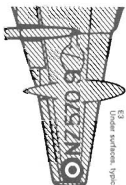


D3
Upper surface, D2 similar.

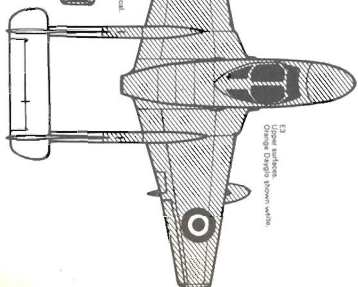


A3
Upper surface.

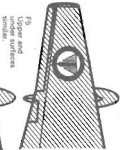
A3
Lower surface.



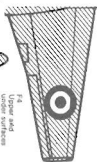
E3
Under surface, typical.



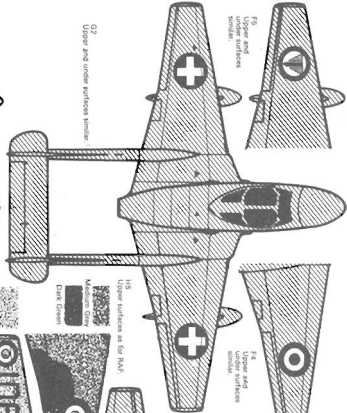
E3
Upper surface:
Orange. Lower surface:
Orange. Dipped brown white.



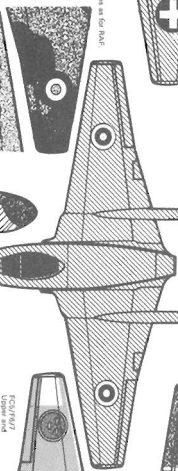
F3
Upper and under surfaces similar.



F4
Upper and under surfaces similar.



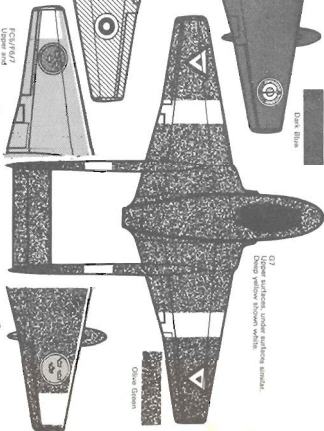
G2
Upper and under surfaces similar.



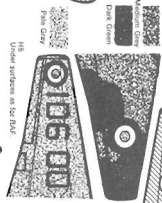
G5
Upper and under surfaces similar.



G6
Upper and under surfaces similar.



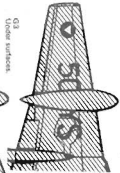
G7
Upper surfaces, under surfaces similar. Keep primary known white.



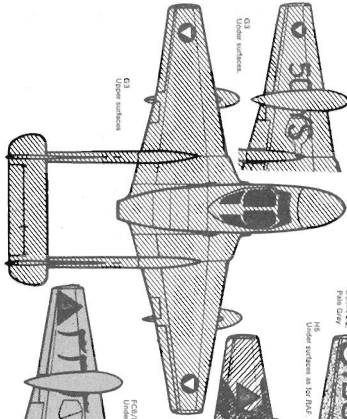
H6
Upper surfaces as for RAF.



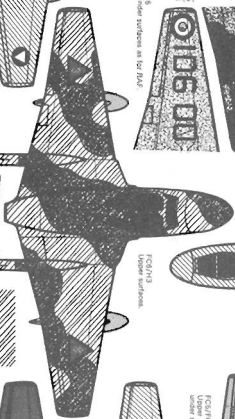
H8
Upper surfaces as for RAF.



Q3
Upper surface.



Q4
Upper surface.



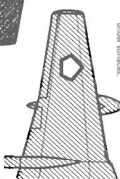
FC2/N3
Upper surface.



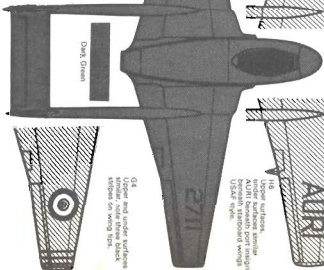
FC2/N3
Under surface.



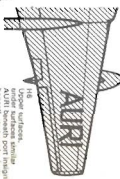
FC2/N3
Under surface.



G4
Upper surface, under surfaces similar USAF style.



G4
Upper and under surfaces similar. Note three black stripes on wing tips.



H6
Upper surface, under surfaces similar. Keep primary known white. Below: USAF style.



Silver



Dark Blue



Sand



Stone



Pale Blue



Olive Green

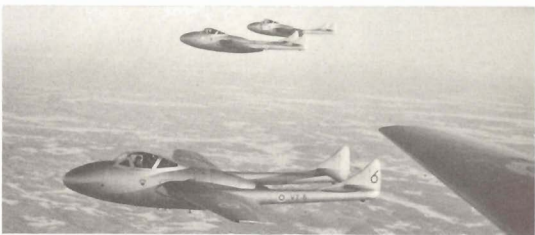
Right: Port and starboard views of
an FB.52 of 2 Lennosto.
(Finnish Air Force)



Below: VT-7 a T.55 of 2 Lennosto
(N. Kiska)



Right: Formation from 2 Lennosto.
VT-6, 1 and 4. (Finnish Air Force)



Below: VT-6 of 2 Lennosto at
Halli, July 1959. (Eino Ritaranta)



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Netherlands East Indies Air Force
West German Luftwaffe

Front cover, top to bottom:

F.1, No. 130 Squadron, Royal Air Force, 1946.
FB.9, No. 14 Squadron, Royal New Zealand Air Force.
F.1 Radio-controlled target drone, 310 "Aramis", French Air Force.
T.55, Union of Burma Air Force.
J.28B (FB.50) of F 5, Swedish Air Force.
T.55 of the Iraqi Air Force.

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